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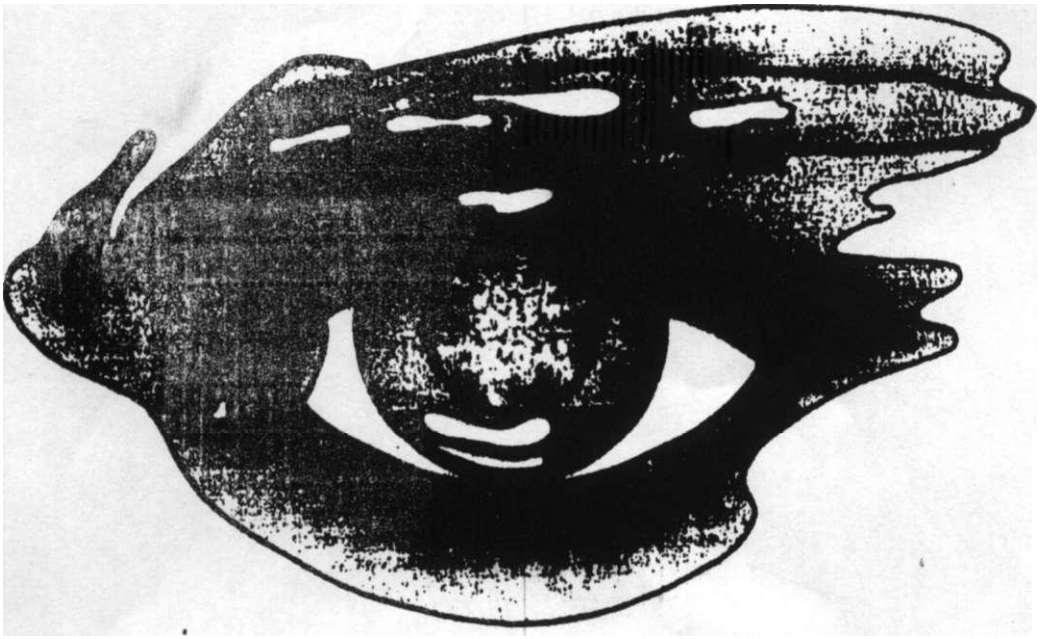
OPHTHALMOLOGY SLIDES

PRACTICAL EXAM



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PREFACE

The main objective of this book is to supply the medical students with various forms of clinical aspects of the ophthalmology course. It comprises illustrated drawings of slides and compact text to review their knowledge. It also include new chapter on practical clinical examination. Although this book is not intended to be a substitute for textbooks.

This text can be helpful to get full mark in the end of round as well ***as*** end of year examination.

Prof. Or. SAAO RASHAO,
Professor of Ophthalmology,
Cairo,2006

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I would like to thank ***Mohamed Saad M. Rashad,*** Assistant lecturer of Ophthalmology, Ain Shams University Hospitals, for his simple, illustrative, attractive and impressive drawings of this book.

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OPHTHALMOLOGY SHOES

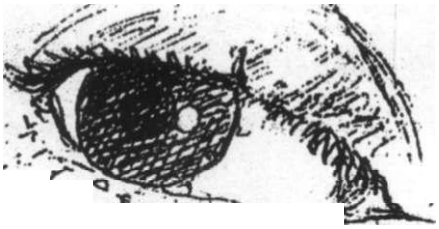
EYE LID

\/ 1-Bilateral cpteowthus

- Etiology: **1-** Under developed nasal septum.
  2- Racial.
  3-Mongolism.
- *C I O* : Cosmetic.
- Effect of this lesion: Apparent convergent 5fluint.
- TTT: Plastic surgery if persists after development of nasal septum (surgery at 10 years)._____\

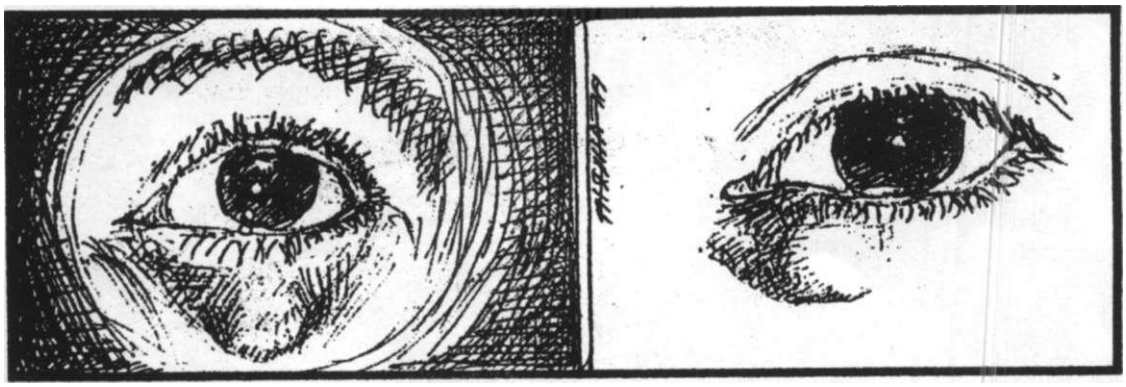
/2-**ConoenitoJ Cotobonw of upper eve lid:**

- Most serious complication: **1-** Exposure keratitis—>corneal ulcer e lagophthalmos
  2- Corneal keratinization.
- Management: **1-** management of lagophthalmos.
  2- Blepharoplasty (surgical reconstruction of eye lid).



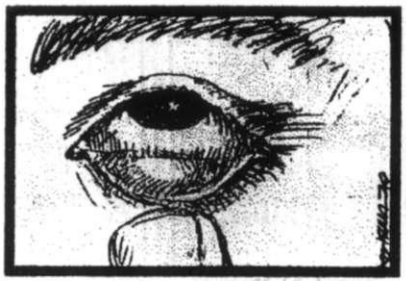
3-Chokmion of upper eye lid:

- Complication: 1- Secondary infection-* infected chalazion.
  2- Chalazion granuloma.
  3- Mechanical ptosis.
  4- Reversible corneal astigmatism.
  5- Chemical irritative conjunctivitis.
- Operation of choice: Incision - curette *operation.*
- C/o: Painless localized swelling of lid of long duration.
- Recurrent chalazion: - Same site Excision/
  - Different site -» Vit a



4.5- Chalazion of lower eye lid:

I/
- Complication: 1-Secondary infection-* Infected chalazion.
  2- Chalazion granuloma.
  3- Mechanical ectropion.
  4- Chemical irritative conjunctivitis.
- D.D of this condition: 1- *Adenoma* of the meibomian gland..
  2- Sebaceous cyst.
  3- Infected chalazion.
  4- *marginal* chalazion should be differentiated from stye.
- Operation of choice: Incision- curette *operation.*



6-**Chalazion of lower eve lid from inside (coniunctival side):**

- Predisposing factors: 1- Vit A deficiency.
  2- Seborrhea.
  3- Uncontrolled *errors* of refraction.
  4- Working in dusty media.

7- Chalazion granuloma:

- Diagnosis only.
- C/O: Chronic unilateral conjunctivitis.
- i l l : Excision of granuloma, then removal of chalazion.

8-Indsion curette operation:

- Indication: T T T of large , soft(cystic), non- infected tarsal chalazion.
- Advantages of chalazion forceps:
  1- Localization & fixation of chalazion.
  2- Haemostasis.
  3- Protection of the globe.
  4- Lid evertion.

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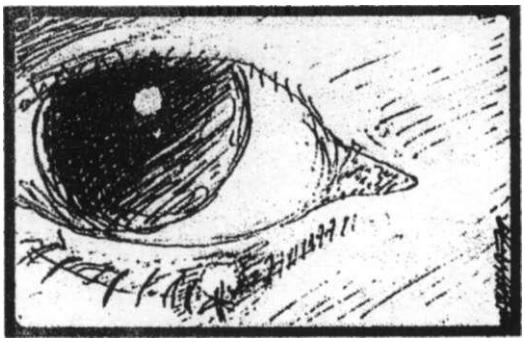
9- Pre-septol diffuse cellulitis with mechanicol ptosis of upper lid:

- Type of pain: Dull aching pain. ,
- T T T of choice: 1-Hot fomentation,
  2-Systemic antibiotics.
- D.D.: 1-**Pre-**septal cellulitis.
  2- Diffuse stage of stye.
  3- Diffuse stage of infected chalazion.
  4- Infected traumatic wound.
  5- Secondary to orbital cellulitis.



10- Localized stage of stye s

- Pain, C/O : Acute throbbing pain.
- Causative organism: Acute staph. Infection of Zies gland .
- Two complications: 1-One lash trichiasis (most common).
  2- Cavernous sinus thrombosis(most serious).
- Cause, Predisposing factors: 1- Diabetes (especially in adults).
  2- Uncorrected errors of refraction (esp. in children).
- TTT: 1- Drainage of pus either by: 1- Apilation of infected lash.
  2- Horizontal incision without anesthesia.
  2- Hot fomentation.
  3- Local and systemic antibiotics.

11- Multiple styes in child:

- Predisposing factors: 1- General debilitating disease e.g. ieukeamia.
  2- Uncorrected errors of refraction.
  3- Juvenile Diabetes.
- Causative organism: Staph. Aureus.
- TTT: as before.
- Investigations: 1- Retinoscopy.
  2- Blood sugar.

12- Multiple stye in adult:

- Predisposing factors: 1-Uncontrolled Diabetes.
  2- Uncorrected *errors* of refraction.
- Investigations: 1- Blood *sugar* level.
  2- Retinoscopy.

13- Belpharoconiunctivitis:

- Causative organism: Morax axenfield diplobacillus.
- Three physical signs: 1- Seborrhea in face.
  2- Blepharitis.
  3- Conjunctivitis.

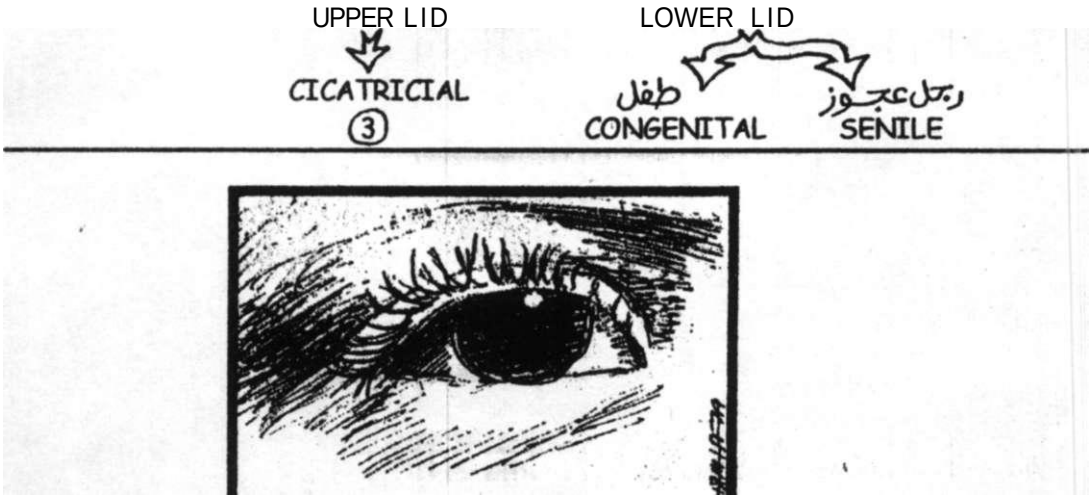
14.15 Ulcerative blepharitis:

- C/O: Severe itching , burning sensation, lacrimation, photophobia, blepharospasm.
- Causative organism: Chronic Staph Aureus infection.
- Predisposing factors: 1- Scaly blepharitis.
  2- After exanthemata (fever-rash-» Measles + mumps).
  3- Bad hygiene.
  4- Malnutrition , Diabetes, Vitamin deficiency.
  5- Errors of refraction.
- D.D. Mucopurulent conjunctivitis.
- Complications: 1- Trichiasis.
  2- Madarosis.
  3- Tylosis-»epiphora-> cicatritial ectropion.
  4- Marginal corneal ulcer.
  5- Chronic conjunctivitis.
  6- Endophtalmitis after 10 operation.
  7- Recurrent styes.
  8- Canaliculitis.
- TTT: 1- **NaHC03** 3% lotion -> wash discharge & remove crusts.
  2- Antibiotic eye ointment-^ rubbed on lid margin + lashes 3 times /day
  Given for 3 weeks after clinical cure.
  3- Steroids-> Decrease fibrosis.
  4- TTT of cause & Correct predisposing factors.
- Antibiotic of choice : Antibiotic eye ointment.

16- Trichiasis causing superficial corned scarring (opacity) & superficial corneal vascularization (IMPORTANT):

- First line of TTT: Electrolysis (followed by keratoplasty).
- *CIO:* Foreign body sensation, pain, headache, reflex lacrimation, photophobia, blepharospasm.
- Commonest cause: 1-Trachoma. 3-Ulcerative blepharitis.
  2- Chemical injury. 4- Membranous conjunctivitis.
- Complication: 1- Corneal ulceration, opacity.
  2- Superficial *corneal* vascularization.
  3- Conjunctival ulcers, kerotinizotion, chronic conjunctivitis.

N.B. SLIDES OF ENTROPION .TRICHIASIS

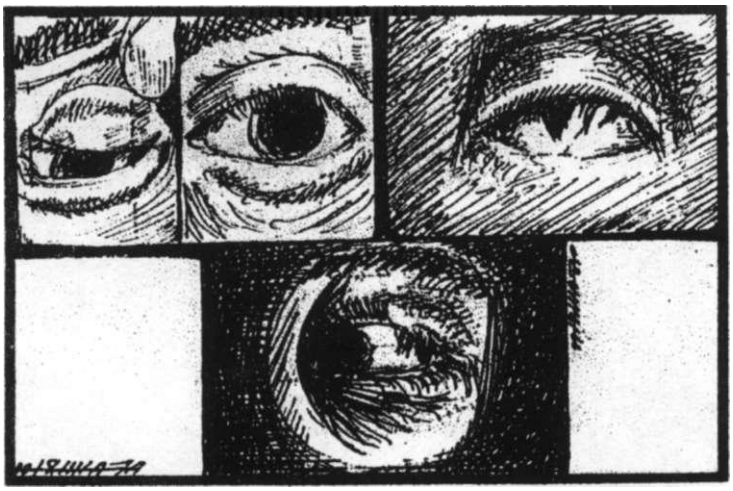


17-Conocnital entropion trichiasis of lower eye lid:

- TTT: 1-Self limiting.
  2- If persists, Surgically [skin & muscle operation] cosmetic repair at school age.

18-Senile entropion trichiasis of lower eye lid:

- Predisposing factors: 1-Senile enopthalmoS**[due to senile atrophy of retro bulbar fat].**
  2- Laxityfredundancy] of skin 4 ligaments.
  3- Weakness of facial connections of orbicularis occuli muscle.
- Complication: Spasm of Riolan's muscle-* 1- Corneal ulcer & vascularization.
  2- Chronic conjunctivitis & Conjunctival ulceration.
  3- Rubbing lashes.
  4- Mucopurulent conjunctivitis & F.B.
- T T T of choice: 1- T T T of conjunctivitis A corneal ulcer.
  2- Wheeler's operation.
  3- Wejs operation.



19. 20. 21-Cicatrictal entropion trichiasis of upper eye lid:

- Most common cause: Trachoma.
- T T T of choice: 1-Snel ten's operation.
  2- .Webster operation.
  3- Posterior lamellar graft,

22-Pqrolytic ectropion of lower eve lid:

- Cause: Facial nerve paraiysis[LMNL most common Bell's palsy.
- Most serious complication: 1-Ulcer with lagophthalmos.
  2- Exposure keratitis 4 Conjunctival keratinization.
  3- Epiphora.
- *CIO:* Cosmetic , burning sensation, watering of eye & blurring of vision.
- Management: 1-Wait for six months for spontaneous improvement:
  With -» Artificial tears • Physiotherapy + S. Steroids for Bell's palsy.
  2- Neurological examination.
  3- Management of lagophthalmos: .__**Jj**
  _^ Artif. Tears **(gel** & drops) • Contact lens f La1gTorsoi(rhopl|»y^
  4- Lateral tarsorrhaphy. 5- Fascia lata sling operafion.
- To whom you refer ? To Neurologist.

23- Cicatricial ectropion of lower eve lid:

- Most serious complication: Ulcer with lagophthalmos.
- Management: 1- Management of lagophthalmos.
  2- IF large-* Blepharoplasty[Full thickness skin graft] +
  Temporary median tarsorrhaphy.
  3- If small -» V-V operation or Z - plasty operation.

24-Severe congenital <u>unilateral ptosis + Bilateral cpiconthus:</u>

- C/O: Cosmetic disfigurement, visual impairment if complete.
- Complications: 1-Amblyopic -> Squint, if unilateral or Nystagmus if bilateral.
  2- Scoliosis & ocular torticollis.
  3- Shyness & inferiority complex.
  4- Head retraction 4 Lordosis.
- Most important tests before doing surgery: 1-<u>Thumb test</u>.
  2- Visual acuity
  [To exclude amblyopia].
  3- Corneal sensation.
- Time of surgery : As soon as possible.
- TTT: Frontalis sling operation after correction of epicanthus.

<u>25-</u> Median tarsorrhaphy <u>/ IMPORTANT]:</u>

- Indications : i-Neuro- paralytic[Neurotrophic] keratitis—corneal ulcer.
  { Loss of corneal sensation due to trigeminal n. affection}
  2- Resistant central corneal ulcer [in blind eye].
  3- After skin graft in Cicatricial entropion.

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26- Basel cell carcinoma f Rodent ulcer]:

- Locally malignant tumour , no distant metastasis.
- TTT: Radiotherapy , Cryotherapy. Local excision.

27-Squamous cell carcinoma:

- Send local & distant metastasis.
- TTT: Excision with safety margin + Post operative histopathological exam.
  If fungating -> Epithelioma.

ft

CONJUNCTIVA "XT

28. 29- Typical Conjunctival hyperemia:

- *Characters:* 1- Vasodilatation of posterior Conjunctival vessels.
  2- Bright red in color.
  3- Maximum in fornices.
  4- Move with movement of conjunctiva. ***f&***
  5- Usually associated with discharge[important].
- Etiology A Different types of con junctivitis: 1-MPC
  2-PC
  3-0phthalmia neonatorum.

£R£D_EV£3

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30-Qphthdmfa neonotorum [V. IMPORTANT!:

- Causative organism: 1-Chlamydia oculogenitalis [80%].
  2-**6xBgcocci** [20%].
  [1,2 *ore* most common & Acquired during passage in birth canal].
  3- Other bacterial hospitalinfection e.g.staph,strept,E coli.
  4- Viral infection [Herpes genitalis].
  5- Chemical kerato-conjunctivitis e.g. Silver nitrate.
- Signs: 1-Marked lid edema.
  2-Yellowprofuse purulent discharge[Blanorrhea].
  3-Conjunctival Cheilosis [edema] • Spot Hemorrhageftoxic capillaritis]
  4- Preauricular* submandibular lytnhadenitis.
- Most serious complication:
  I-Sccondary corneal ulcer usually central with perforation.
  2-Dense corneal opacity -» Defective macular development[amblyopia]-* Nystagmus.
  -> If unilateral -> Squint.
  3-Anterior polar cataract.
  4- Endophthalmitis 6 Panophthalmitis.
- D.D.: 1- Congenital NLD obstruction [Congenital Dacrocystitis].
  2- ? May be Buphthalmos.
- i l l : 1-Prophylactic: 1- Proper antenatal care.
  2- Treatment of any maternal infection.
  3-Anti-septic delivery.
  4- Broad spectrum localantibiotic[3 times/day for 7days].
  2- Active: 1-Hot fomentation, Boric acid eye lotion.
  2- If Chlamydial-* Local Tetrac^inejsM^n+
  -» Erythromycin.
  3- If gonococcal-* Local Penicillin Examine parents.
  4- Cycloplegic{Atropine] -> If *cornea* is affected.
  5- Systemic *Brood* spectrum antibiotic[by Pediatrician].
- Define this condition:

It is any form of conjunctivitis occurring in first 10 days after birth ,it is preventable 6 acquired during delivery.

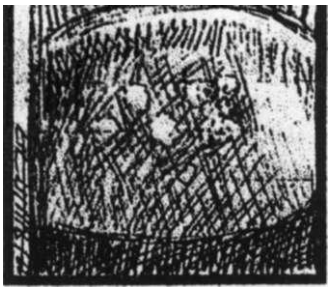
31- Mucopurulent **conhwctivffitfMPCl?**

- Causative organism: 1-Koch- weeks bacilli [Heamophillus egypticus].
  2-**'StaphTsfrept.**
  3- Pneomococci.
- *CIO:* Redness • discharge + Burning sensation • lid swelling + Halos around light.
- Complication: 1-Secondory corneal ulcer usually central with perforation.
  [May be marginal]
  2-Dense corneal opacity [scar]:
  -» defective macular development! Amblyopia] -> Nystagmus.
  ->If **uniksf** era I -> squint.
  3- Panophthalmitis & Endophthalmitis.
  4- Anterior polar Cataract.
  5- Chronicity.

- D.D.: 1-Halos around light :1-Incipient stage of immature senile cortical Cataract.
  2-ACG.
  3-Corneal edema.
  2- Glued lashes -» Ulcerative blepharitis.
  3-Red eye-> I C , CU , ACS, Scleritis, Episcleritis.
- TTT: 1-Boric acid lotion 2-4%.
  2-Hot fomentation & Dark glasses,
  3- Local antibiotics: 1- Chloramphenicol eye drops.
  2- Tetracycline ointment at night.
  3- Sulfonamide eye drops , if no pus.
  4-Systemic antibiotics -> severe ***costs.***
  5-Atropine ointment -» if cornea is affected.

32-FoWculor coniunctivHis:

- D.D.: 1- Viral infection-» Adenovirus-* Epidemic keratoconjunctivitis
  -> Pharyngeo- conjunctival fever.
  -> Herpes simplex -> Herpetic conjunctivitis.
  2- Chlamydia oculogenitalis [Inclusion blenorrhea].
  3-Acute trachoma in foreigners.
  4- Allergic . due to chronic medication [Drug induced e.g. Atropine + eserine].
  5- Folliculosis.
- Causative organism: 1- Adenovirus . 2-Herpes S. Virus.
  p. 3- Chlamydia oculogenitalis. 4 - Chronic use of drugs.
- TTT: 1-becongestant. 2- Removal of the cause.



33-Acute Trachomatous follicles & papillae:

- Causative organism: 1- Chlamydia Trachomatous serotypes AJLC-
- C/O: Gritty sandy sensation, scanty MP discharge Redness +Heaviness of lids.
- Complications: 1- Eye lids: 1- Trichiasis [Multiple] 2- Ptosis.
  3- Cicatricial entropion.
  2-Conj.: 1-Xerosis. 2-Posterior symblepharon.
  3- Corneal: Ulcers 4 opacities.
  4- Lacrimal i Fibrosis of N L D ->Doerocystitis A Epjghora.
- TTT: 1- Boric acid lotion wash.
  2- Local 4 systemic Sulf onamidesf sulphacetamide eye dropslO-30%].
  3- Local 6 systemic Tetracycline { Ointment at night].
  4- In sensitive cases-* Chloramphenicol 0.4 % *eye* drops.
  5- Atropine -> If cornea affected.

N.B. IF 2 LIDS [UPPER + LOWER]-* FOLLICULAR CONJ.
IF UPPER LID ONLY -> TRACHOMA OR SPRING CATARRH.

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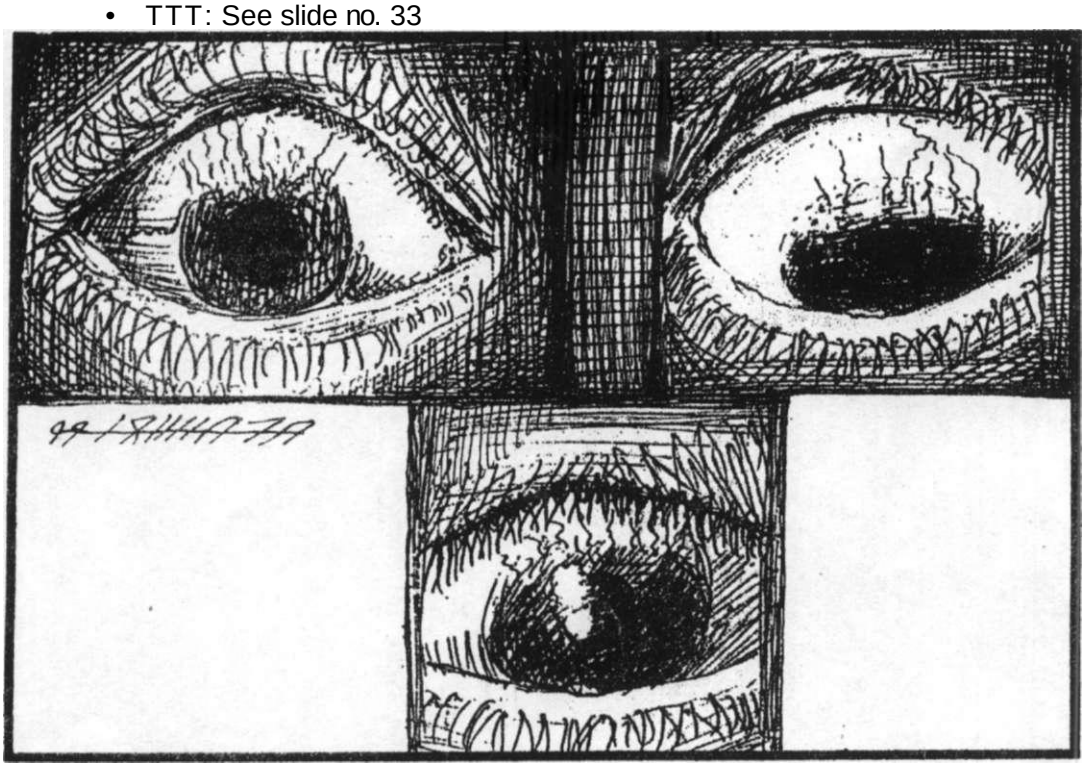
34,35, 36-Acute Trachomatous follicles & papillae + Ponnus:

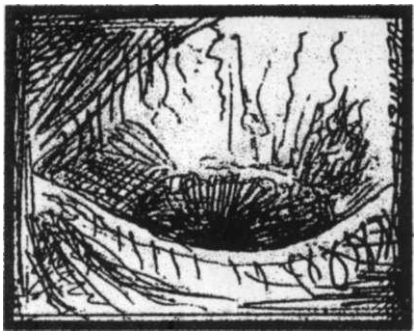
- TTT: See slide no. 33



37,38.39- Active **Trachomatous pannus:**

- Define: Subepithelial infiltration with inflammatory cells + vascularization of corneal margin, usually limited to upper half of cornea. i
- D.D. : 1- Trachomatous. 2-Phlyctenular. 3-Leprotic.
  4- Degenerative! Atrophia bulbi & Absolute Glaucoma].
  5-Mechanica! [Rubbing lashes].
- Fate: l-j£gmplete resolution , If B.M. is intact. 2-C. opacity, if B,M, is destroyed.
  3-Kertectosiar Bulging forwards of cornea].
- TTT; See no. 33

- Coarse of trachomatous pannus : 1- Progressive. 2- Regressive.. 3-Healed.
- Types of trachomatous pannus: 1- P. teniusf Thin P.].
  2- P. Vasculosus[vascular P.].
  3- P. Annulosus[rounded P.].
  4- P. Carnosus[Fleshy P.].
  5-P.Siccus[Dry P.].



40-Healed trachomatous pannus with Herbert's pits.

41-Herbert's pits.[festooned cornea].

42-Scerred palpebral conjunctiva:

- Most common cause: Trachoma.
- Causes: 1- Trachoma.
  2- Membranous conjunctivitis.
  3- Chemical injures.
  4- Steven - Johnson's syndrome.
- Two Complications: 1-Cicatricial entropion Trichiasis.
  2-Xerosis + Posterior symblepharon.

43- Membranous conjunctivitis:

- Causative org, or D.D.: 1-Diphtheria bacilli.[t)iphtheria until proved other wise].
  2-Viral [Severe Adenoviral infection].
  3- Chemical Burns & caustics.
  4- Fungal conj.
  5- Severe pneumococcal conj.
- Specific complication^- General: 1- Toxic myocarditis .Nephropathy,. Nephritis Neuritis, Neuropathy.
  2-Local: 1-Central <S marginal C.UIcer.
  2-Xerosis.
  3- Entropion Trichiasis.
  4- Symblepharon.
  5-Fibrosis of lacrimal duct.
  6- Optic neuritis + Squint d.t. cranial n. affection.
- Specific TTT: 1-Anti-toxic serum.
  2-Penicillin systemic & local.
- Investigations: 1-Culture 4 sensitivity from membrane. 2-Blood culture.
- Specific lines of TTT: 1- Prophylactic:
  1-mass immunization.
  2-Isolation of patient + Notify health office.
  3- Prophylactic anti serum for contacts.
  4- Prophylactic antibiotic in other eye.
  2- Curative:
  1- Complete bed rest to avoid heart failure.
  2- Antitoxin serum.
  3- Local A systemic penicillin.
  4- Guard against symblepharonf ointment].

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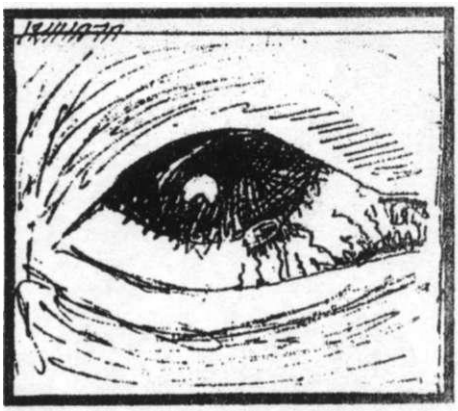
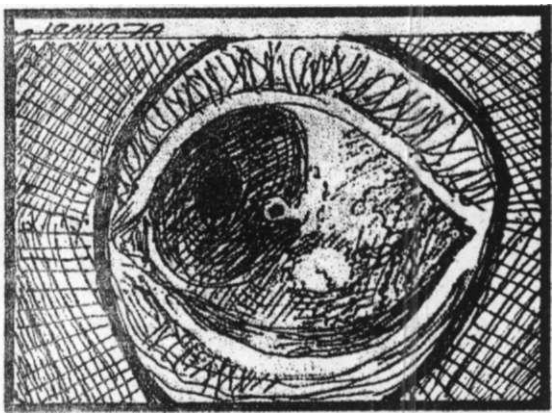
44- Posterior Symblepharon:

- C/O:1-Binocular diplopia [d.t. limitation of movement].
  2- Symptoms of lagophthalmos: Redness, burning sensation , dryness.
  3- Cosmetic disfigurement.
- Causes: 1- Healed Trachoma [post.].
  2- Chemical burns [ant.].
  3- Diphtheritic conj. { Membranous conj.} [ant.].
  4- Postoperative after ptregium surgery [after recurrent excision] [ant.].
- Complications: 1- Binocular diplopia.
  2- Complications of lagophthalmos.
  3- Conj.: 1- Conj. Ulcers 6\ keratinization.
  2- Chronic conjunctivitis.
  4- Corneal: 1- C.U. & keratinization.
  2- Exposure keratitis A Vascularization.
- TTT: 1- Management of lagophthalmos.
  2- Excision of fibrous tissue with glass rod or artificial conjunctival shell.
  3-Mucous membrane graft.
  4- TTT of the cause.

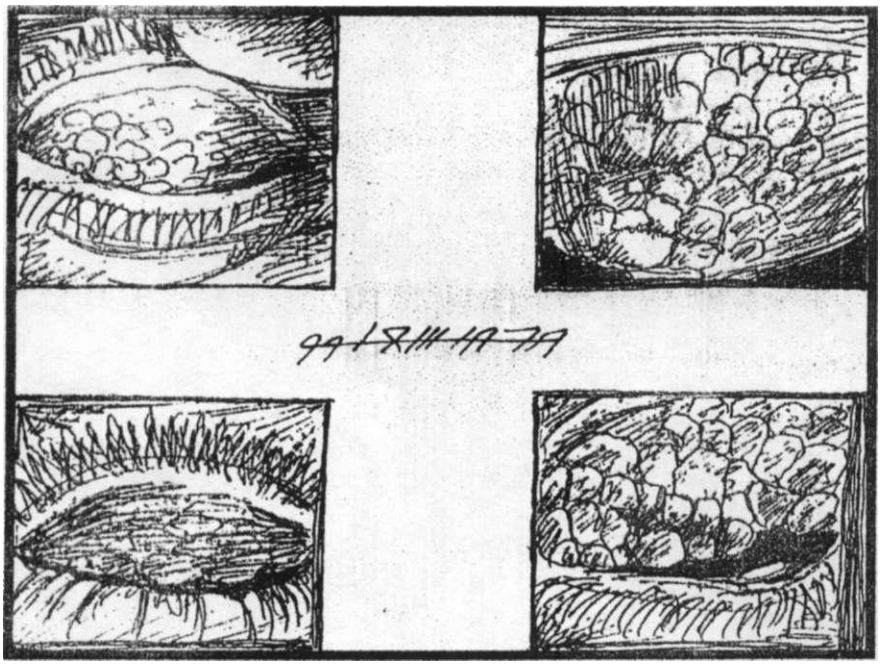




45-Phlyctenular Keratoconjunctivitis: 46 Phlyctenular conjunctivitis:[V.IMPORTANT]
[Limbol phlycten]

- Etiology: Type IV Hypersensitivity reaction [cell mediated I.R.] d.t. endogenous Toxins [Antigens]: e.g. T.B. focus, Tonsillitis, Septic focus of Staph., Intestinal parasites , Ulcerative Blepharitis.
- Associated *disease:* T.B. .Tonsillitis,....etc.
- Complications: 1-Recurrence, if the cause is not treated.
  2- Limbal c.u. 3- Secondary infection by Staph.->MPC.
  * 4- Phlyctenular pannus.

- D.D.: 1-Conj. Phlycten: 1- Pinguicula.
  2- Episcleritis!. Nodular].
  2- Limbal Phlycten[in slide no. 45].
  3- Limbal [bulbar] spring catarrh.
- TTT: 1-Topical steroids. 2-1 I I of septic f ocus[cause].
  3-Local Antibiotic, for secondary infection.
  4-fTN Slide no. 45] Cyclop leg ic[Atropine]-* if Keratoconjunctivitis.



47.48.49,50-Polpcbrol spring catarrh:

- Etiology : Atopy.type I hypersensitivity reaction d.t. exogenous antigenft IgE].
- Commonest presentation: Bilateral, recurrent, seasonal attacks of itching A ropy discharge + lacrimation.
- Other clinical types you know : 1- Bulbar S. catarrh. 2-Mixed type.
- Complications: 1-Corneal: 1-Keratitis superf icialis vernalis of Tobgy.
  2-Corneal plaques.
  3- Arcus senilis like opacity [Cupid's bow].
  4- Weakness of cornea-* increase incidence of Keratoconus A keratectasia.
  2- Comp. of prolonged use of steroids: 1-Sec. Glaucoma.
  2- Complicated cataract.
  3- Viral infection reactivation.
- Safest drug used for long time for this patient: Local decongestant.
- Safest I T T: 1- Dark glasses A cold fomentations[compresses].(Most effective).
  2- Local decongestant A local Antihistaminics.
  3- Local Disodium Cromoglycate.
  [DON'T MENTION STEROIDS].
- TTT: 1,2,3, *as* before. 4-Steroids in severe *cases.*
  5-8-irradiation or cryo on papillae in resistant *cases.*
- D.D. of spring catarrh: 1-Trachoma. 2-MP A PC.
- D.D. of Giant papillary conjunctivitis: 1- Advanced Spring catarrh.
  2- CL users. 3- Protruding stitches .

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52-Corneol plooue in spring catarrh:

- Cause: Corneal affection in spring catarrh.
- Pathology: Large microerosions in corneal epithelium with deposition of exudates [covered with mucin] -> Resistant Corneal ulcer.
- TTT: As spring catarrh + Cycloplegic [Atropine].

53-Afwrcsis:riMPORTANT1.

- Etiology: 1-Prolonged repeated painting [using] Silver Nitrate -> deposits in elastic tissue of conjunctiva [walls of B.V.].
  2- Occupational.

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54-SubconiunctivoJ Hemorrhage:

- Management: Self limiting condition, needs no l l l (Reassurance of patient].
- Causes: 1- Spontaneous.
  2- Blunt trauma.
  3-Excessive straining as whooping cough.
  4-Hemorrhagic blood diseases.
  5- Vascular diseases e.g. Diabetes & hypertension.
  6- Conjunctivitis.

[USUALLY THE Q IS MENTION 3 CAUSES].

55-True pttryqiumf progressive):

- Etiology : Degenerative disease of *cornea* 4 conjunctiva d.t. exposure to:
  UV rays , heat, dust, irritative chemical fumes, dry sunny environment.
- *CIO:* Cosmetic disfigurement,
  Drop of vision-* if irregular astigmatism.
  -> if affecting central area of *cornea.*
- Complication: 1- Recurrence , after excision[v. common].
  2-Repeated excision: 1-Anterior symblepharon.
  2- *Corneal* thinning & opacity.
- i l l : Surgical removal: 1- Excision e bare scleral technique.
  2- Excision e lamellar KP.
  3- Tucking. 4- Rotation island operation.
  Followed by Beta irradiation [3000-6000 rods over 3-5 days].
  5- conjunctival graft.
  6- Excision • Mitomycin C topically twice daily for one week.
- D.D.: Pseudopterygium. •

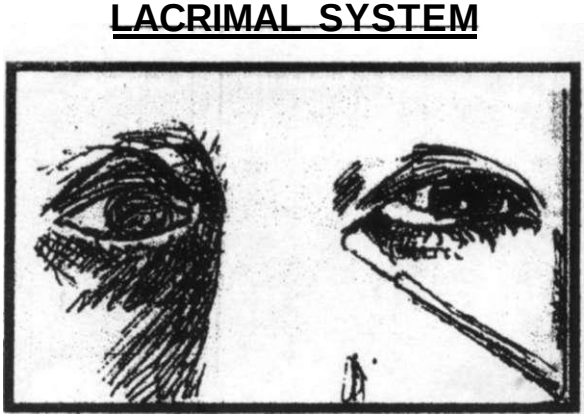
56-Bitot <u>spots in cose of</u> Xerosis: [IMPORTANT!.

- Etiology: Abnormal activity of Meibomian gland[mucin deficiency] & gas formation by proliferation of Xerosis bacilli.
- *Causes:* 1- Trachoma. 2- Chemical burns.
  3- Repeated removal of pterygium. 4-Lagophthalmos. 5-Diphtheria.
- Specific test: Fluorescine break up time test.
- TTT: 1-Scraping [removal of Bitot spots].
  2-Artif icial tears [Methyl cellulose eye drops 1%.
  3-Vit A.

<u>57-loss of</u> corneal luster <u>in cases of Xerosis:</u>

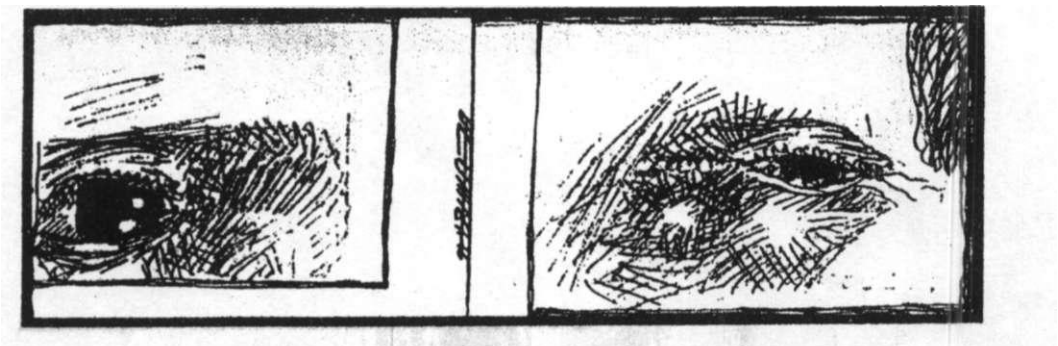
- *Causes:* l-Conjunctival scarring & fibrosis d.t.: 1- Healed Trachoma.
  2-Chemical burns.
  3- Diphtherial Membranous conj.].
  2-Lagophthalmos.
  3- Vit A deficiency
  4-Sjogren's syndrome.
  [142 ARE *COMMON* CAUSES — 3 IS LESS *COMMON]*
- Etiology: Mucin deficiency d.t. destruction of Goblet cells.
- C/O: Burning 4 gritty sensation + *redness* + Discharge.
- Compl.: 1-Corneal ulcers, keratinization.
  2-Conjunctival ulcers, keratinization.
- Sp. Test: Fluorescine break up time test[Normally 15-35sec, if less-*diagnostic].
- TTT of choice: 1- Artificial tears [Methyl cellulose eye drops 1%]
  2- Therapeutic CL of high water content.
  3- Ointment at night + Vit A.
  4- Scraping of Bitot spots.

LACRIMAL SYSTEM



58- Chronic DocrocysltHs with +vc regorge test:

- Commonest causative organism: Pneymococci.
- *CIO:* 1-Watering of eye especially on exposure to cold or dusty atmosphere .
  2- Swelling at medial canthus below AAPL at root of nose.
- Causes[Etiology]: 1- Congestion of lower end of wall of NLD[in menopausal OJ.
  2- Fibrosis [stricture] of NLD.
- Complc: 1-In lacrimal sac : 1- Acute Dacrocystitis with lacrimal abcess or fistula
  2- Mucocele or Pyocele.
  2- Epiphora -» Eczema dermatitis-* Cicatricial ectropion.
  3- As a source of infection : 1- Chronic conjunctivitis .
  2- Typical hypopyon CU.
  3- Endophthalmitis after 10 surgery.
- Investigations: 1- Radiography: 1-Plane x-ray.
  2- Dacrocystography.
  2- John's dye test.
  3-ENT exam.
  4- Culture 4 sensitivity + [Bleeding 4 clotting time].
- TTT: -DCR after medical control of infection by :
  1- Local 4 systemic antibiotics. 2- Conjunctival 4 nasal decongestant drops.
  3- Irrigation.
  -Dacrocystectomy , If DCR is contraindicated.



59,60-Acute Dacrocystitis:

- Causative org.: Pneumococci + Staph, Strept.
- *C/O*: Acute painful , red, hot tender swelling below medial canthus +Watering of the eye + FAHM.
- Complic: 1- Local: lacrimal abcess 4 f istula{ common},Pyocele, Orbital cellulitis.
  2- Systemic : Cavernous sinus thrombosis[serious].
- TTT: 1- Local 4 Systemic AB+ Hot fomentation 4 Analgesics .
  2- Sac incision [oblique incision] to drain pus , if pus is pointing.

61-John's dye test I [»ve]:

- Indication: 1- To confirm or exclude presence of obstruction.
  2- To test patency of lacrimal system.
- Uses: Diagnosis of: 1- case of Epiphora.
  2- Patency of lacrimal passages.
  3- Case of partial obstruction.
- In this slide -> Patent lacrimal system.

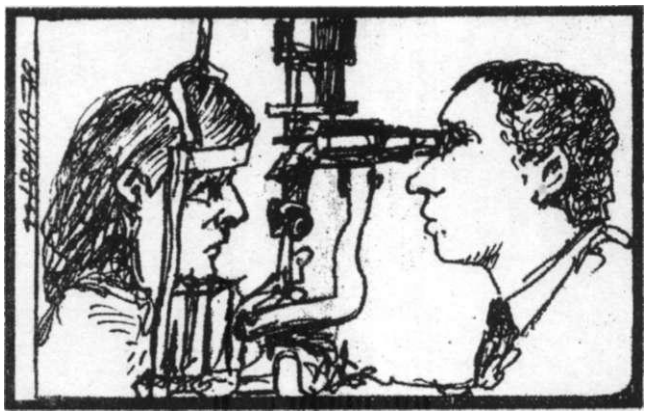
of fcsrimoJ possoqesf lacrimal irrigatton]:

- Indications: [To test patency of lacrimal ***drainage*** system]:
  1-Differentiate obstruction from congestion around NLD.
  2- Injection of medication e.g. Adrenaline & penicillin.
  3- Injection of ultra - lipidol used in Dacrocystography.
  4- Localize site of obstruction.

63 Probing of lacrimal passages:

- Indication: [therapeutic 4 diagnostic]:
  1-Conservative T T T of congenital Dacrocystitis in children after 6months to 1 year.
  2-**Localize** site of obstruction. 3-Help canalization of NLD 4 Hasner's valve.
- If patent duct & loss of function-* Facial n. paralysis.

CORNEA



64- Slit lamp biomicroscopy:

- Uses: 1-Examination of anterior segment { from cornea to anterior vitreous face].
  2-Examination of angle 4 fundus.
  3-Applied to it: 1- Goldmann applanation tonometer.
  2- Slit lamp camera.
  3- laser delivery system.

65-Fluorescine sodium **2%** dye:

- Uses: 1- Staining of corneal ulcerjgreen] 4 conjunctival ulcer [yellow].
  2- Diagnosis of corneal fistula [River sign, Siedle test].
  3- Fluorescine break up time test [Xerosis].
  4- John's dye test to diagnose Epiphora.
  5- Systemically 10% , in Fluorescine fundus angiography.
  6- Fitting of hard CL.
  7- With applanation tonometer.
- Commonly we use Fluorescine paperless paper]not bottles[tainted by pseudomonous].

[GREEN ULCER]

66-Comeol ulcer with +ve fluorescine stain **:rV.** IMPORTANT]

- Type of Pain: 1-Pricky pain .
  2-Referred fronto-temporal headache , Photophobia, reflex lacrimation. Blepharospasm.

- *CIO:* Pricky pain, referred fronto-temporal headache , Photophobia, reflex Lacrimation + diminution of vision[as it is central] + *redness.*

- *Causes:* 1-Bacterial ulcer.
  2-Neurotrophic keratitis.
  3- Geographical viral ulcer.

- Causative organism: Pneumococci [commonest].

- Predisposing factors : 1-Diabetes, Renal 4 liver failure.
  2-Systemic 4 local steroids.
  3- Near by infection: -> Conjunctivitis.
  -> Dacrocystitis.

- Complic: 1-perf oration 4 anterior polar cataract.
  2-Sec. glaucoma 4 iridocyclitis.
  3- Central Corneal scar.

- TTT:1- Atropine.
  2- Local 4 systemic antibiotics [eye drops , ointment, subconjun. Injection]
  3- Bandage.
  4-Hot fomentation 4 Analgesic for pain .
  5-Cautery.
- If -ve fluorescine -> Disciform [stromal] keratitis.
  -> Corneal facet[not ulcer].

67-Dcntritic ulcer,+vc Fluorescine stain with cobalt blue filter of slit lamp:

- Causative org.: Herpes simplex type I virus.
- Source of infection: Trigeminal ganglion.
- C**/0**:Moderate pain, redness, photophobia, lacrimation, marked drop of vision.
- **2** Methods of cauterization: **-7%** Tincture iodine in akohol[superficial reaction].
  -Cryoapplication - **50** ° c for **5** sec.

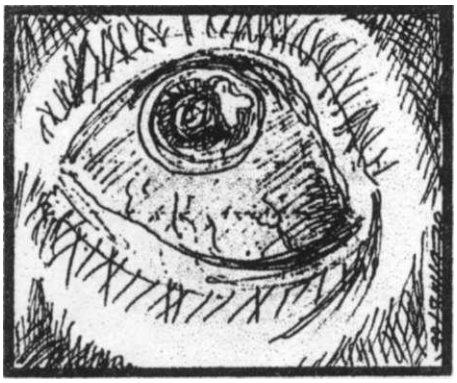
Methods of staining: 1-Fluorescine **2%.**
2-Rose Bengal stain [stain cells containing virus].
3- Double stain : both 1**+2.**

2 specific **compile:** 1-Disciform keratitis.
2-Keratitis metaherpetica.
3-Amoeboid [geographical] ulcer.
4-Recurrence.
5-Corneal hypothesia.
6-Hemorrhagic IC + Sec. glaucoma.
7-Superf icial faint opacity [Nebula].

- **2** Causes of perforation: 1-Local steroids. **2**-Secondary infection.
- Main lines of TTT: l-Cycloplegic[Atropine].

2-Loeal antiviral: [Mention **2** specific drugs ***7]***
1- Acyclovir [Zovirax] **3%** eye ointment **5** times / day.
2- IDli [Idox uridine].
3- Adenine Arabinoside { Ara A],
4- Tri f lurothimidine[TFT].
3-Bandage.
4-Antibiotics, for secondary infection.

Contraindications: 1- Steroids. **2-** Hot fomentation.



68- Dendritic ulcer . +ve fluorescine stain, [linear!

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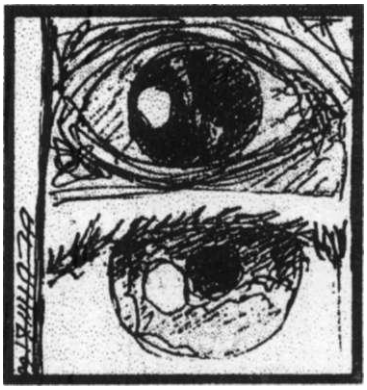
69-6coqrophicol (*Amoeboid)* ulcer , +vc fluorescine *stain* seen by cobalt blue filter as seen by slit lamp:

- Cause of change of shape of *dendritic* ulcer to this form:
  Most of corneal epithelium is affected d.t.:
  1- Topical steroids[mainly].
  2- Secondary infection [marked *decrease* in immunity].
- TTT: 1- *Atropine.* 2-Local antiviral. 2- Bandage.



70- Dendritic ulcer with stromal affection [Disciform keratitis]:

- TTT: 1-Atropine.
  2-Local steroids under umbrella of Antiviral [Zovirax].
- Etiology: Antigen- *Antibody reaction d.t. invasion* of toxins of Herpes simplex virus to stroma of *cornea.*

71-Herpes- Zoster ophthalmicus [affecting ophthalmic division of Trigeminal

t TTT: 1-Local: 1-Atropine, 2-Sterqids. 3- Antibiotic ointment.

7 *vffW* 2-Systemic: Antiviral[Zovirax tab, 400mg 5times/day] • Nerve *tonics.*

- Most serious complic.:l-Neurotrophic [neuroparalytic] keratitis 4 CU ,
  (Damage of trigeminal nerve).
  2-IrTdocyclitis.

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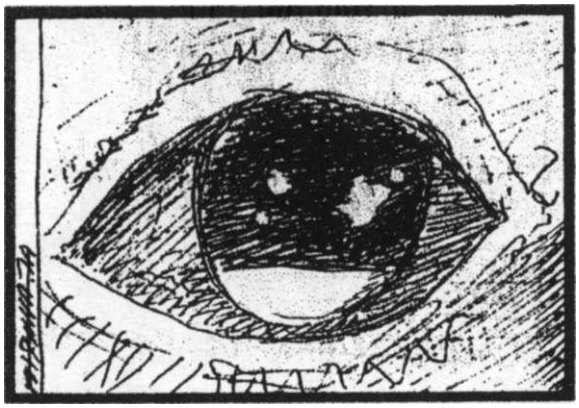
72-**Neurotrophic keratitis [corneal ulcer]:**

- Etiology: loss of corneal sensation.
- 2 Causes: 1-After healing of Herpes Zoster ophthalmicus.
  2-Recurrent Herpes simplex.
  3-Radical TTT of Trigeminal neuralgia.
  4-Fracture base of the skull.
  5-Superior orbital fissure syndrome.
  6-1 n absolute glaucoma.
- *CIO:* Defective vision [d.t. central ulcer], *redness,* No pain.
- Main lines of TTT: 1-Median tarsorrhaphy.
  2-Therapeutic soft CL [high water content].
  3-Artif icial tears + long term bandage.

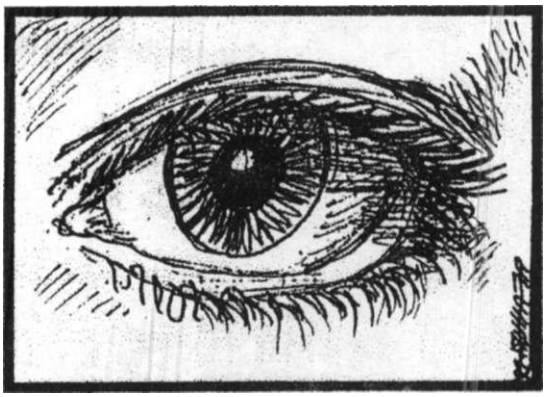


73-**Hypopyon corneal ulcer:**

- 2 Causative organisms: 1-Pneumococci mainly [Typical 80%].
  2-Morax Axenf ield bacillus [Atypical 20%].
  3-Staph., Strept. 10%.
- 2 Complic: 1-Perf oration with lens sublaxation 4 Endophthalmitis.
  2-Sec. glaucoma. 3-Anterior polar cataract.
- 2 methods of cauterization: 1-Pure carbolic acid 100%[Typical].
  2-20% Zinc sulfate, in cases of Morax Axenf ield, (Moraxelb) [Atypical].
- TTT: 1-Atropine + Antibiotic [Local, systemic, subconj.]. + Bandage.
  2-Cautery by carbolic acid. 3- Conjunctivoplasty.
  4-Penetrating KP. [2,3,4 for resistant *cases].*
  5-TTT of predisposing factors.
  6-TTT of Sec. glaucoma [Decrease IOP , Timolol, Diamox].

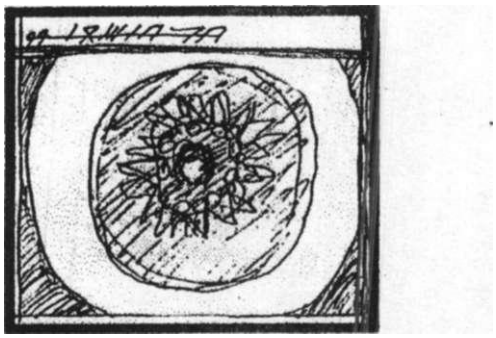
74-Tattooing of corneal opacity:

- Indication: *Central* leucoma non- *adherent* in Amblyopic [blind] eye.
- *Contraindication:* Leucoma non adherent with intact vision-*Severe chemical IC.



7b-Colored Contact lens:[Pink + pink eye shadow].

- Indication: 1-Cosmetic T T T of: 1-Leucoma [*corneal scar]* in *non-seeing eye.*
  2-Anterior staphyloma in blind eye.
  2-IridodiaYfSis.



76-Penetrating Keratoplasty with running sutures:

- Indications: l-Visual[optical]: 1- *Central* leukoma in seeing eye.
  2-Keratoconus.
  2- Therapeutic: 1- Resistant or *perforated* CU. *2-Corneal* fi
  3-Structural: 1-Rupture globe,
  2-Perforated Cu.
  3-Removal of pterygium *[After* multiple *excisic*
  4-Limbal masses + *symblepharon.*
  5-Cosmetic: [in leukoma] in *blind eye.*

ad* nr*Mr ****

77-Penctroting keratoplasty after removal of suture with peripheral iridectomy:

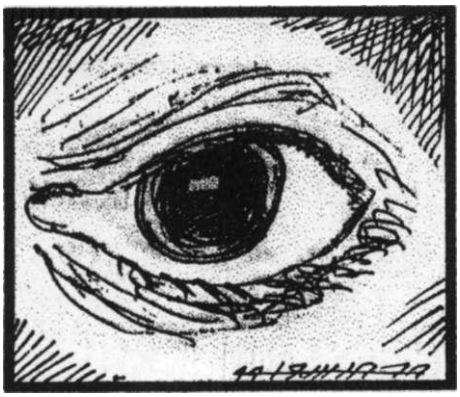
- 2 Complic: 1-Primary Graft failure [first day postoperative].
  2-Delayed opacification, vascularization-*Graft rejection[after 2wks].
  3- Wound gapping.
  4-Postoperative astigmatism.
  5-Infection.

78-Kerotoconus:

- *CIO:* Bilateral painless gradual diminution of vision in young adult[mosth/
- Compile: 1-Corneal oedema [acute hydrops].
  2-Irregular myopic astigmatism.
- D.D.: 1- Inflammatory : 1- Anterior staphyloma.
  2- Keratectasia.
  2- Non- inflammatory: 1- Keratoconus .
  2- Keratoglobus.
- First line of TTT: 1- Hard contact lens.
  2- If intolerable or apical scar [Failed]-* PK.
- TTT of choice : Epikeratophakia.

78-Kerotoconus. +ve Monson's sing:

- Sings: 1-Eorly coses diagnosed by: I-Keratometer[increase power].
  2-Placcido's disk [irregular circles].
  3-Retinoscopy[spinning red reflex].
  2-Advanced cases : 1-Central cornea is thin.
  2-Lid margin is V-shaped on looking down[Manson sign].
  3-Fleisher s ring [heamosiderin deposition-* epithelial].
  4- Apex of cone -> Opacities-* Rupture of Descmet's m.
- 2 Specific tests: 1-Placcido's test [detect corneal astigmatism].
  2-Keratometer[measure astigmatism].
  3-Retinoscopy.
  4- Slit lamp.

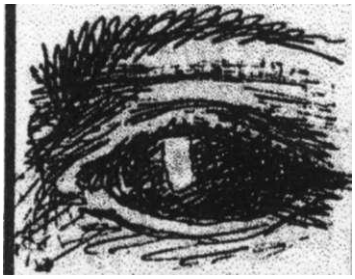


80-Arcus senilis [Dioanosis only] [LID PULLED DOWN AND OUT].

- Does not affect vision.
- Asymptomatic.
- No TTT.
- D.D.: 1-Spring catarrh. 2- Pannus siccus.
- Mention 3 imp, dif f. Between it <S Trachomatous pannus:
  1-Usually in old age. 2- Never affects vision. 3-Clear zone.

81- PorHol anterior staphyloma:

- Define: Bulging of outer coat of eye lined by inner coat or coats depending on its position commonly associated with increased IOP.
- Etiology: Big perforated peripheral corneal ulcer.
- 2 complic: 1-Sec. glaucoma-* Blindness. 3-Sec.IC.
  2-Irregular corneal astigmatism. 4-Sec. cataract.
- TTT: 1-If seeing eye:Control IOP by:- Medical: Timolol, Diamox, *K* syrup.
  -Surgical: SST operation.
  2- If blind eye^Cyclodestructive operations: 1-Cyclocryo.
  2- Retrobulbar inj.of alcohol.
  -Cosmetic correction.

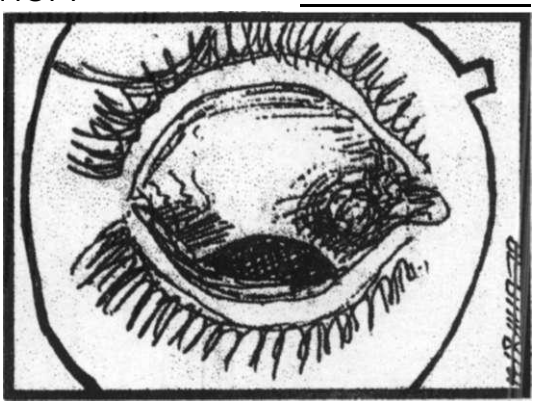


82-Total anterior staphyloma^ HALF FACE OF A CHILD].

- Cause: Big perforated corneal ulcer.
- Etiology: e.g. Keratomalacia 4 Acute Vit A deficiency.
- Complic: Sec,, glaucoma -> Blind painful eye.
- TTT: [BLIND EYE]: 1-Cyclocryo.
  2-Retrobulbar injection of alcohol + anaethesia.
  3-Enucleation after consent.

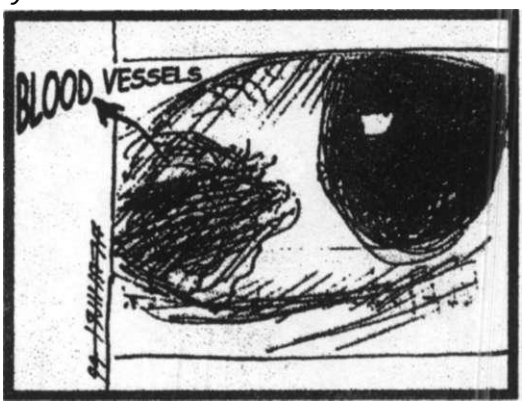
83-Ciliary ft intercalary staphyloma:

- Etiology: *I-Sclera:* 1-Weak sclera in its natural perforation:
  1-Canc! dfSchlem.
  Z-Anterior Ciliary artery.
  2-Weak scleralscar *after* healed recurrent Scleritis
  or *Cryo-application[Radiation or diathermy].*
  3-Congenital weakness as *Marfan &* Osteogenesis Imperfecta.
  2-High IOP.



84-Ciliorv staphyloma: rDO NOT REACH LIMBUS].

- Etiology: As slide no. 83 , except *Cana\ of* Schlem replaced by After Cyclocry
- TTT: 1-Seeing eye-> *Control* IOP [Medically or Surgically].
  Z-B\ind eye -> Enucleation after consent.

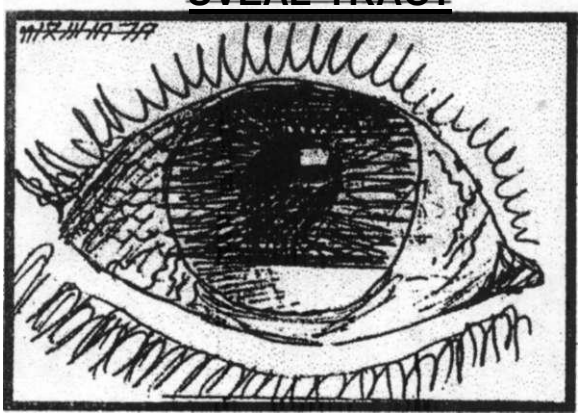


85-Nodular Episcleritis:

- Etiology: 1-Idiopathic in healthy persons.
  2-Active collagen *diseases* [autoimmune] e.g. SLE, Rheumatoid art
  Ankylosing spondiolytis, 6out [metabolic].
  3-Chronic *specific infec.[Septic focus]: T.B.,* leprosy. Staph., Stref

- *CIO:* Tender , painless nodule on conjunctiva, no drop of vision , never suppurate or ulcerate.
- Complic: Staphyloma.
- D.D.: 1-Phlyctenular conjunctivitis. 2-Rheumatoid arthritis in .
- **I I I :** 1-Only line [Local steroids].
  2-Systemic TTT of cause by steroids A NSAIDS.

UVEAL TRACT

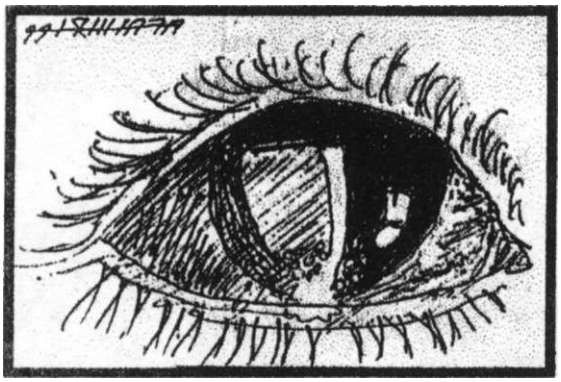


86-Acute severe iridocyclitis with hypopyon :rV.IMPORTANT|.

1-Causes: 1-IC-* 1-Behcef s disease.
2-Associated with arthritis.
2-Endophthalmitis.

2-Complic: 1-Sec. gbucoma[Opened or closed angle].
2- Complicated cataract.
3- Toxic maculopathy.
4- PS + PAS.

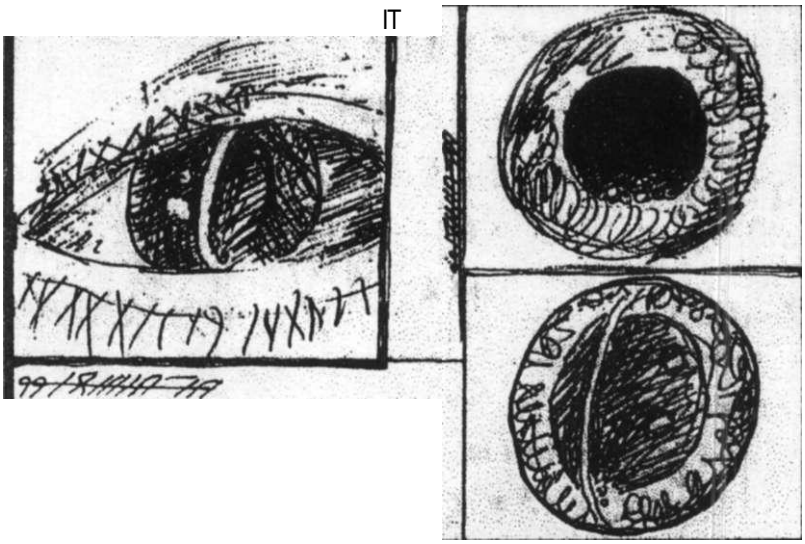
3- TTT: 1-Atropine. 2-Local & systemic steroids. [1,2 are TTT of choice].
3-If high IOP: -> Timolol, Diamox, Mannitol.
4- TTT of cause [T.B., Behcet,..etc] 4 complications.



87-Acute IC .Keratic precipitates & dense aqueous flare zfIMPORTANTl.

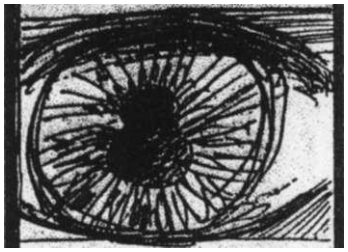
- Etiology of diminution of vision in this case:
  1-Aqueous flare. 2-Keratic precipitates. 3-Corneal edema.
  4-Toxic maculopathy. 5- Pupillary membrane. 6-Cyclitic membrane.
  - 7-Spasm of accommodation -> Transient myopia [Increased lens curvature].
- TTT: Atropine • Steroids.

IT



88.89-KeraHc precipitates as seen by silt lamp In Acute *Id*

- *Causes* of pain : 1-Stretch & irritation of nerve endings by toxins 4 edema.
  2- Spasm of intrinsic muscles.
  3-Congestion d.t. spasm of ciliary ms. around ciliary veins.
  4- Secondary Glaucoma.



90-Chronic iridocyclitis . Partial posterior synechia with festooned pupil:

- Do you like to give this patient steroids *7* No, only if aqueous f lare is present.
  Steroids only given in case of activat
- Complic.:l-Posterior synechia 4 Festooned pupil.
  2-**Seclusio** pupillae: Ring or annular synechia.
  3-Occlusio pupillae: Occlusion of pupil by organized exudates.
- 4-Total posterior synechia-* Small fixed pupil.
  5-**Ectropion** of uveal pigment.
  6- Destruction of iris -> Atrophy.

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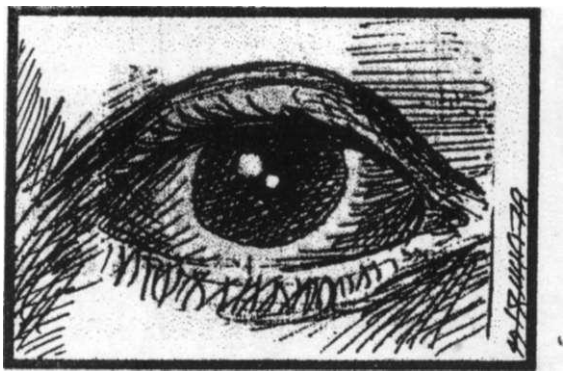
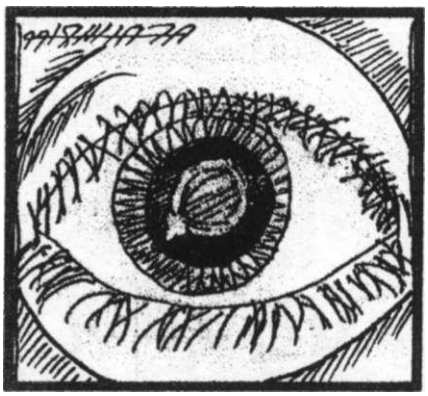
LENS



91-ConqtnJto.l anterior polar cataract:

- Cause: Delayed embryonic development of anterior chamber [delayed separation of lens from ectoderm.
- Etiology: 1- Hereditary.
  2- Maternal infections as rubella.
  3- Maternal malnutrition as Vit D A Calcium deficiency.
  4-Inborn errors of metabolism as galactosemia.
  5-Fetal hypoxia.
- Symptoms : Asymptomatic [Do not affect vision because away from nodal point]
- D.D: Acquired Anterior polar cataract -> Unilateral.
  •> Leukoma non-adherent.
  [Due to small central perforation of CU J.
- TTT: No need for TTT.



92-Zonular cataract:

- Etiology: 1-Hereditary . 2- Maternal malnutrition: Vit D A Calcium deficiency [In neonates A infants].
- C/0:1-Leukocorea. 2-Nystagmus. 3-Bitatera I Drop of vision.
- Complication: Amblyopia -> Nystagmus.
- Best operation: 1-Lensectomy + partial anterior vitrectomy.
  2-Correction of aphakia-^ CL + Epikeratophakia.

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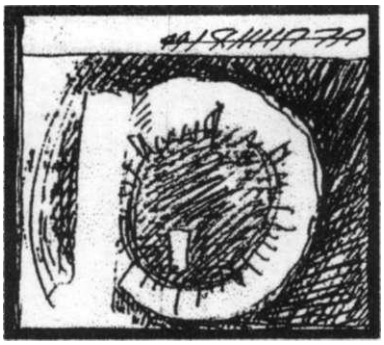
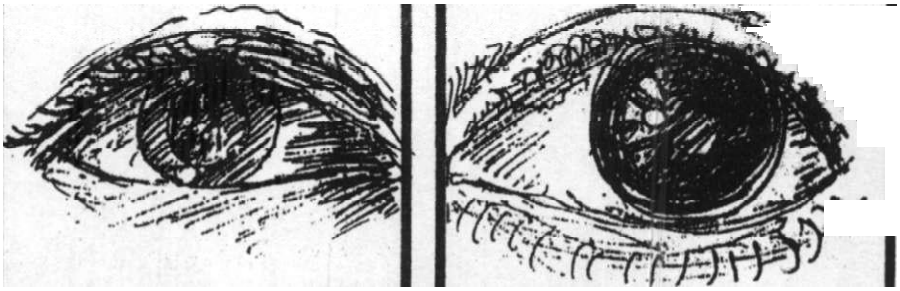
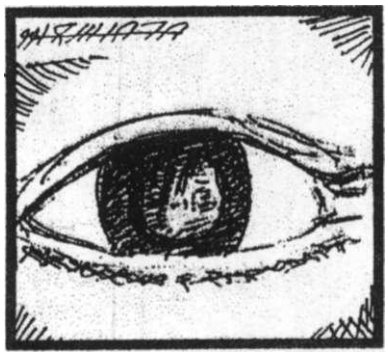


93-Zonular cataract [Lamellar] as **seen with** red reflex:
[Steering wheel appearance].



94.95- Immature senile cortical cataract:[Sectorial greyish white opacity].

- C/O: Bilateral gradual painless drop of vision [Better than HM].
  No halos or diplopia.
- Most serious complic: 1- Lens intumescence-* Pupillary block.
  2-Sec. Glaucoma.
- TTT: *ECCE* + IOLfPostertor chamber].



96-Mature senile cortical cataract:

- How to evaluate visual field in this patient? -> Projection of light.
- How to evaluate macular function? -> Color discrimination.
- How to evaluate retinal function?
  Visual acuity: 1- Hand movement[minimal visual acuity accepted].
  2- Color discrimination.
  3-Projection of light.
  4- ERG.
  5-U ltrasonography.
- Best TTT: ECCE + IOL [posterior chamber].

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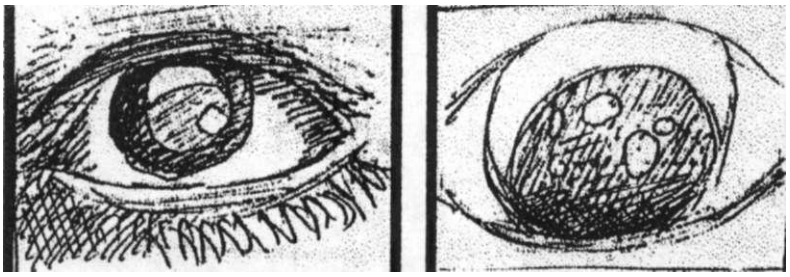
97-Scitik nuclear cataract:

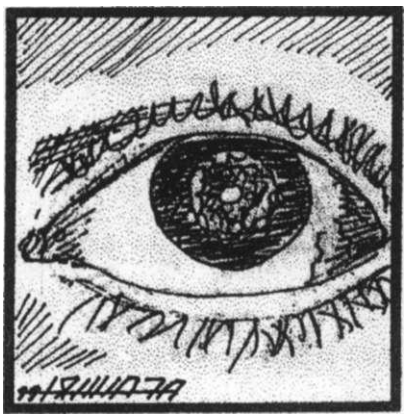
- C/O: Defective vision especially in day time [day blindnessj[Earry myopic shift].
- TTT: ECCE + IOL [Posterior chamber].



99 *'71<?* ***t4 /ir,«wzo***

98.99- Hypermature Morgagnian senile cortical cataract:

- 2 Complic: 1-Subluxation & Dislocation of lens.
  2- Phacolytic Glaucoma.
- Visual acuity : HM.
- TTT: ECCE +IOL [Posterior chamber].

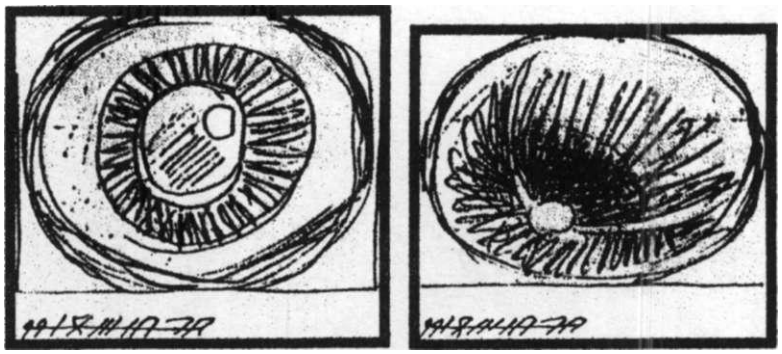


100-Hypermature shrunken calcified cortical cataract: [IMPORTANT].

- 2 Complic: 1-Subluxation 4 Dislocation of lens.
  2-Phacolytic Glaucoma •> Sec. open angle glaucoma.
- TTT: If intact zonule -> ECCE +IOL
  If subluxated -»ICCE.
- Visual acuity -> HM.

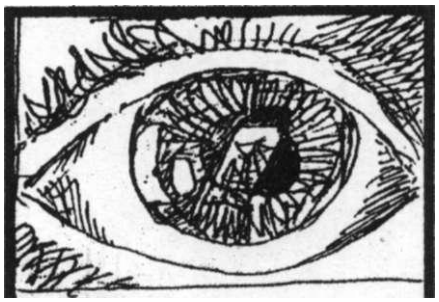
101-Subkixoted ttrtaroctus lens:!" IMPORTANT].

- Causes: l-Congenital weakness of zonule [*Marian's* syndrome].
  2-Blunt trauma.
  3-Hypermature cataract.
  4-Perf orated CU with sudden drop of IOP.
- C/O: Drop of vision , No uniocular diplopia.
- Complic: 1-Sec. Glaucoma. 2-Secondary irritative IC. 3- Dislocation of lens.
- TTT: 1-If Soft-> Lensectomy + aphakic correction.
  2-If Hard-»ICCE + ACIOL.



102,103- Anterior dislocation of a clear lens:T as drop of oil].

- Causes: l-Congenital [Marfan syndrome]. 2-Traumatic.
- Compile: 1-Sec, Glaucoma inversus [pupillary block].
  2- Corneal edema [endothelia damage].
  3- Sec. IC.
- Refractive change: Patient will have myopic shift.
- TTT: -Soft-> Lensectomy + partial anterior vitrectomy.
  -Hard-* ICCE • AC IOL + Vitrectomy after control of IOP & Uveitis.



104-Opacified posterior capsule < After cataract >:

- C/O: Defective vision after cataract extractionf Incidence about 25%].
- TTT of choice:YAG Laser photodisruption capsulectomy or Surgical capsulectom

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GLAUCOMA

105-Schiotz indentation tonometer: T IMPORTANT].

- Uses: Measuring ocular tension [IOP] in : 1-Anaesthetized patient.
  2-Children.
  3-Corneal scaring.
- Disadvantages: 1-Inaccurate [affected by scleral rigidity].
  2-Impaired venous return.
  3-Indirect reading.
  4-Transmit infection.
- Advantages: 1- Cheap. 2-Can be used on *scared* cornea.
- Do you like to use it in measuring ocular tension in *ACG?* No. d. t. Corneal edema.

106-6oldmann applanation tonometer: [IMPORTANT]

- Use: Measuring ocular tension.

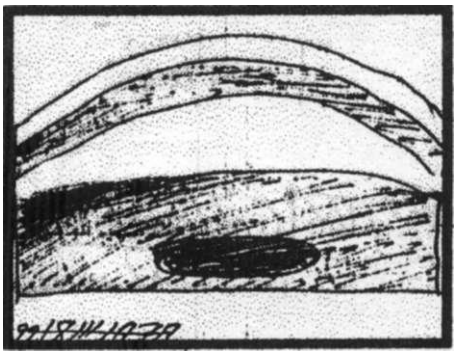
- Advantages: [opposite to disadvantages of Schiotz].
  1-Not affected by scleral rigidity. 2-No impairment of venous return.
  3-Direct reading. 4- Very accurate . can be used in patients e glaucoma [not ACG].

- Disadvantages: 1-Transmission of infection.
  2-Needs slit lamp.
  3-Not used on scarred or edematous cornea.

- Do like to use it to measure ocular tension in *ACG ?*
  No, to ovoid corneal abrasion . - Use digital method -> stony hard.

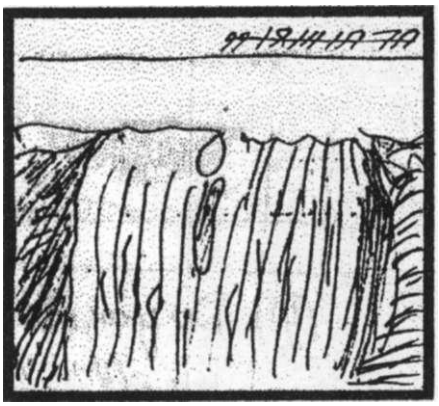
107-Goldmonn 3 mirror Contact *tns:* VIMPORTANT].

- Uses: 1-Examination of Angle [Gonioscopy]. 3-Laser to angle [ALT].
  2-Examination of fundus by slit lamp. 4-Laser to fundus [Retina].

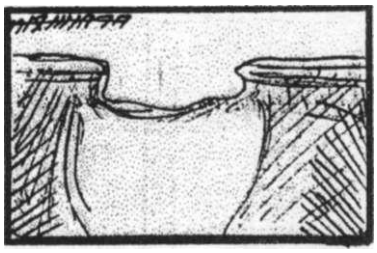


108-Gonioscopy showing peripheral anterior synechia:ITAAPORTANT].

- *Causes:* 1- Chronic *ACG.* 2-1C. 3-Lost anterior chamber.
- Complications: ACG.
- Operation of choice: Subscleral trabeculectomy [S S T].
  (External f istulizing operation).



109-Histology of optic nerve head.



110-Histology of glaucomatous cup:

- Occurs in :l-OAG. 2-Chronic ACG. 3-Absolute glaucoma. 4-Advanced Buphthalmo

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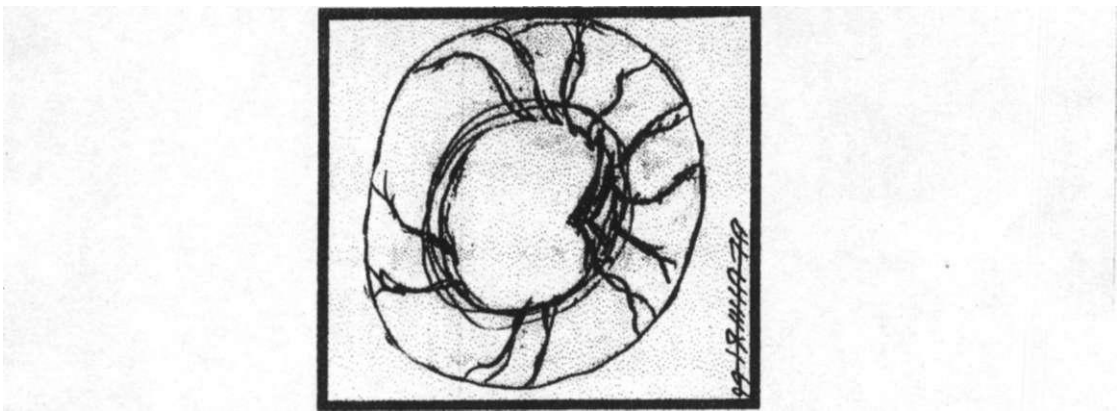
111-Bilotercl daucomQtous cupping ; [V. IMPORTANT].

- Describe abnormalities: 1-Large cup/disc *ratio.*
  2-Asymmetry of the cup.
  3-Nasal shift of blood vessels
  [appear kinking (not continuos) at *undermined edge of* cup].
  4-Stippling of lamina *cribrosa.*
- Investigations: 1-Measuring ocular *tension.*
  2-Plotting of Visual field.
  [142 ARE DIAGNOSTIC FOR CHRONIC OPEN ANGLE *GLAUCOMA}*
  3-Gonioscopy.
- Serious complication: Post glaucomatous optic atrophy = Absolute glaucoma.
- Visual acuity: May be PL or No PL *according to* degree of atrophy.
- Occurs in : 1-OAG. 2-Chronic ACG.
  3-Absolute glaucoma. 4-Advanced Buphthalmos.



112-Advanced glaucomatous cupping (Post glaucomatous optic atrophy):

- Investigations: 1-Measuring *ocuiar tension.*
  2-Plotting of visual field.
- Complication: Post glaucomatous optic atrophy-* V.A. may be PL or No PL.
- Abnormalities: 1-Completely pale optic disc.
  2-Cup/disc ratio = 1/1 [Disc is completely cupped].
  3-Nasal shift of blood vessels • appear discontinuous.
  4-Stippling of lamina cribrosa.

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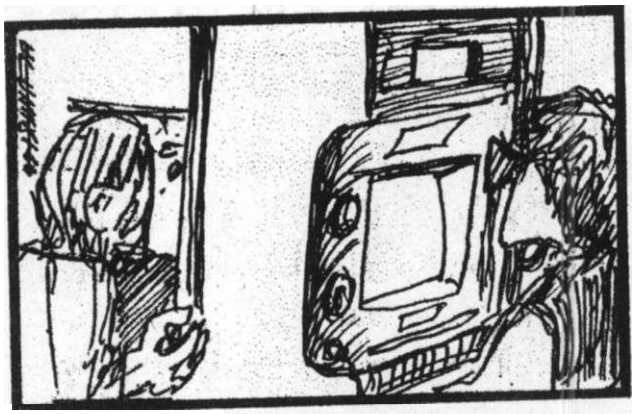
113-Bierrum screen:

- : Use: Plotting of central 30° of visual field.
- Used only in glaucoma.

114-6oldmann perimeter:

- Uses: 1-Plotting central 4 peripheral field.
  2-In glaucoma 4 neurological lesions.



115-Automa+«d ffr»d analyzer:

- Uses: 1- Plotting central 4 peripheral field.
  2- In glaucoma 4 neurological lesions.
- Advantages: 1-Accurate. 2-Calculate sensitivity at different points of field.

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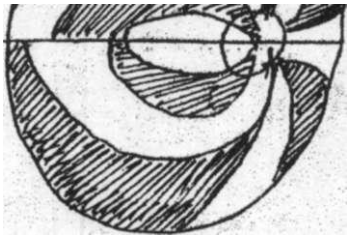

•bn

116-Normul arrongemenr & distribution of nerve fiber layer:

N.B. ALL SLIDES OF FIELD -» V.A. IS **6/6.**

117.118.119-Concentric contraction **of visual field +[Tubulqr field in 1191:**

- Disease causing it: 1-Chronic progressive simple glaucoma[OAS A Chronic *ACG].*
  2-Advanced retinitis pigmentosa.
  3-CRAO with cilioretinal artery.
  4-Post-papilloedemic optic atrophy.
- Diagnostic for Advanced case of *OAG.*

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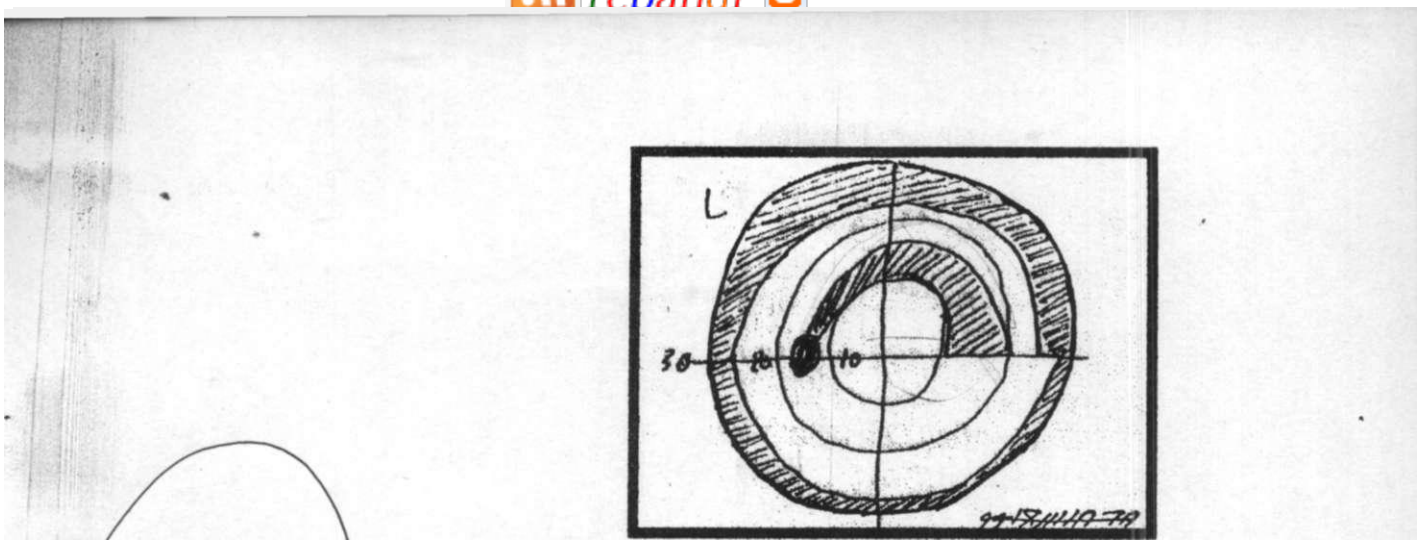


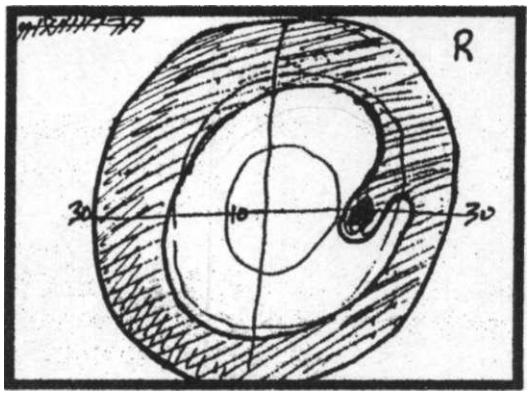
120-Arcuate scotoma. Rormc nasal step & Concentric contraction of central *fii* in case of Glaucoma:fV. IMPORTANT].

- **Diagnostic to: I(OAG) 2-Chronic ACG.**

<e if *td m*	

121-Siedle scotoma in case of olaucomo

- **Diagnosis : Chronic simple glaucoma.**
- **Investigation [Follow up]:** 1-**IOP.** **2-Gonioscopy.**
  3-**Fundus exam. [C/D ratio].** **4- Field changes.**



122 Baring of blind spot . field contraction in case of glaucoma:[V. IMP.].

- **Diagnosis: Chronic simple glaucoma.**

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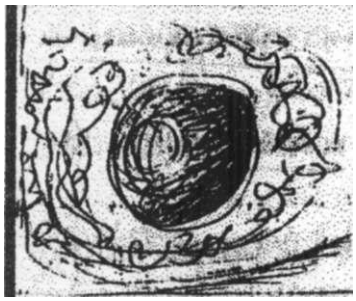
123-HoJos ground light in prodromQl stage of acute congestive glaucoma and Fronto-temporal headache:

- Provocation tests: 1-Dark room prone position test.
  2- Mydriatic test.
- Proryphylactic TTT of acute attack: 1-Miotics. ,
  2-Peripheral iridectomy [surgery].
  3-Peripheral iridotomy [YA6 laser].



124-Acute congestive glaucomas

- Causes of dropped vision: 1-Corneal edema.
  2-Acute anterior subcapsular cataract.
  3-Retinal ischemia.
- Best method to check IOP in this patient: Digital method •> Stony hard.
- Signs: 1-Corneal edema with epithelial vesicles.
  2-Dilated, vertical oval pupil.
  3-Ciliary congestion.
- Predisposing factors: Female, more than 40 years, nervous , +ve family history.
- Complic: 1-Absolute glaucoma. 2-Complicated anterior subcapsular cataract.
- TTT: i-Hospitalization, Morphine sulphate 15mg .SC.
  2-Miotics [pilocarpine].
  3-Hyperosmotic agents [Mannitol 25%].
  4-Timolol [B.B.] & Diamox.
  5-Peripheral iridectomy or SST.
  6-Peripheral iridectomy or laser iridotomy of other eye.
- Contraindications: 1-Atropine. 2- Adrenaline.

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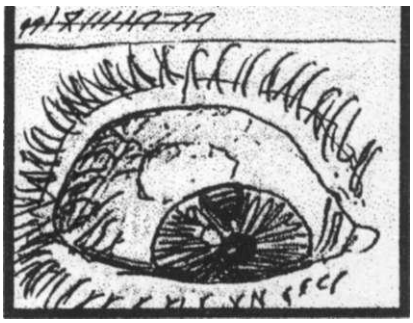
125-Pcripherol iridectomy & patches of iris atrophy offer acute congestive glaucoma! attack:

- Indication of this operation:
  1-Prodromal stage [prophylactic].
  2-Prophylactic in second eye.
  .3-Acute congestive attack . if more than 50% of angle opened.
  4-Step in SST.



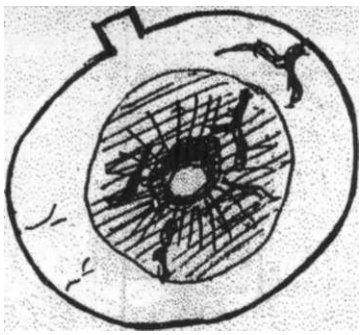
126-Subsderal trabeculectomy, with peripheral iridectomy:

- Indications: [A2CSB].
  1-AC6, if more than 50% of angle closed [extensive PAS].
  2-Chronic stage of *ACG.*
  3-Chronic simple OAS, if failed medically.
  4-Secondary glaucoma [Neovascular glaucoma].
  5-Buphthalmos with hazy cornea 4 Failed goniotomy + Trabeculotomy.

127-Congenital glaucomorBuphthalmos1:[V. IMPORTANT].

- First clinical presentation: Reflex lacrimation, photophobia due to corneal edema.

- 2 Important investigations: 1-Fundus examination to exclude retinoblastoma.
  2-Measuring ocular tension.
  3-Corneal diameter.
  4-Gonioscopy.
- Complications: 1-Multiple recurrence after surgical TTT.
  2-Poor vision & blindness due to:
  1-Optic atrophy. 2-Corneal opacification.
  3-Complicated cataract. 4- Amblyopia.
  5-Retinal detachment. 6-Axial myopia.
- D.D.: 1- From causes of lacrimation : I-Congenital Dacrocystitis.
  2-Ophthalmia neonatorum.
  2-From causes of large cornea : **I-Congenital** megacornea.
  2-Congenital myopia.
  3-From causes of cloudy *cornea:* 1-Birth trauma.
  2-Congenital rubella.
- Main line of TTT: Surgical: 1-Goniotomy, if clear cornea.
  2-Trabeculotomy, if opaque cornea.
  3-SST, if the above measures failed.
- Mention 3 secondary causes of this condition:
  1-Aniridia [Trabeculodysgenesis]. 2-Retinoblastoma.
  3-Sturge- Weber syndrome.



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128-Rubeosis i rid is: [V.VERY IMPORTANT].

- *Causes:* 1-Proliferative diabetic retinopathy.
  2-Central [or branch] retinal vein occlusion.
  3-Chronic IC.
  4-IO malignancies.
- TTT: 1-Active medical TTT: 1-Timolol, Diamox • K syrup for Sec. glaucoma.
  2-Atropine with local steroids to comfort patient.
  2-Panretinal photocoagulation : PRP prophylactic laser.
  3-If failed -> Surgical:
  If seeing eye: SST with valve implantation.
  If non- seeing eye : 1-Cyclocryo.
  2-Retrobulbar injection of alcohol.
  3-Enucleation after consent.
- Vision : PL or No PL.
- Complications: 1-Neovascular glaucoma.
  2-Hypheama.

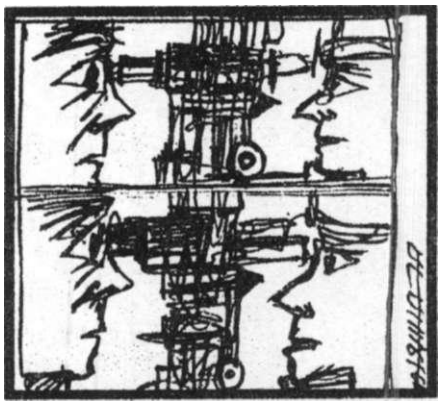
RETINA

129-Direct ophthalmoscopy:

- Uses: Fundus examination.
- Advantages: High magnification.
- Disadvantages:l-Monocular view. 2-Narrow field.
  3-Can not be used for surgery or examination of periphery of f

130-Indirect ophthalmoscopy:

- Uses: 1-Fundus examination. 2-During retinal surgery.
- Advantages : 1-Binocular stereoscopic vision. 2-Wide field.
  2- Can be used during surgery 4 for exam. Of periphery of fu
- Disadvantages: Low magnification.

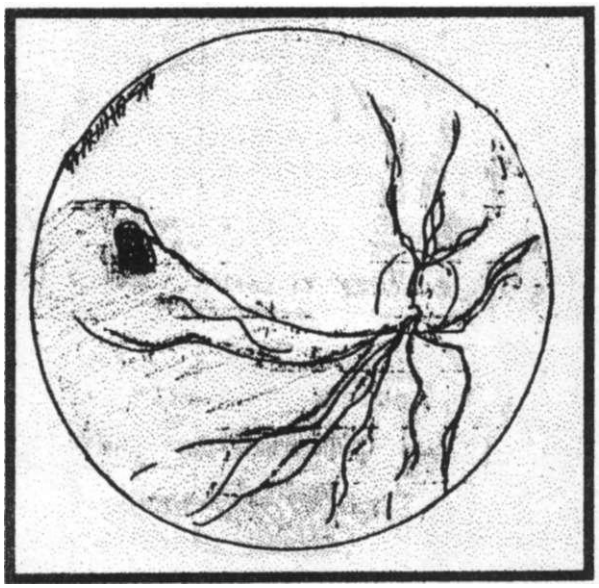


131-Fundus biomicroscopy using contact or non-contact lensfRhuby lens]:

- Advantages : 1-Stereoscopic vision. 2-High magnification.
- Disadvantages: Narrow field.

132,133-Central retinal **artery** occlusion f **Cherry red spot):TV.** IMPORTANT]. [PALE YELLOW].

- C/O: Sudden unilateral painless loss of vision.
- To whom you refer ? Cardiologist.
- 2 Commonest causes: 1-Young age: Infective endocarditis.
  2-Old age: Atherosclerosis.
- D.D. of cherry red spot: 1-CRAO. 4-Amaurotic family idiocy.
  2-Quinine poisoning. 5-Macular hole e localized RD.
  3-Traumatic retinal edema[commotio retinae] (Berlin's edema).
- Vision: No PL.



134-Lower temporal branch artery occlusion:

- C/O: Upper *nasal* sectorial field defect or loss.
- *Causes* of sectorial field defect: 1-branch artery or vein occlusion.
  2-Early RD. **3**-Hemianopia, Quadrantanopia. **4**-Ronne nasal step in glaucoma.
- Refer to : Cardiologist.

135-Centrol retinal vein occlusion: [VERY IMPORTANT]

- C/O: Rapid marked unilateral painless drop of vision.[Better than HM]. [more common in young adult female].
- *Causes* of drop of vision: 1-Retinal hemorrhages.
  2-Cystoid macular edema.
  3-Retinal ischemia.
- Etiology: 1-Atherosclerosis. 2-Primary OAG.
  3- Hyper-coagulability:->Contraceptive pills A Polycythemia.
- Complications: 1)-Persistent retinal hypoxia leading to:
  1-NVD A NVE -> Vitreous hemorrhage Aits sequelae:
  (Tractional RD A ©host cell Sec. glaucon
  2-Rubeosis iridis-> NV Glaucoma [100 day glaucoma].
  2)-Persistent cystoid macular edema -» Persistent drop of vis
- 2 Imp. Investigations: 1-f luorescine fundus angiography. 2-Field ex<
  3-Complete blood picture.4-Systemic exam, of H.T.[E
- TTT: ***lyiaser*** photocoagulation after FFA [PRP]
  1-If macular edema -> Grid pattern laser.
  2- If persistent tissue hypoxia-> PRP.
  Zy TTT of complications: e.g. Persistent vitreous hemorrhage-* Vitrec
  3)-Control of systemic condition A TTT of predisposing factors[cardio

136-Lower trunk vein occlusion:

- C/O: Altitudinal field defect [Loss of upper half of visual field].

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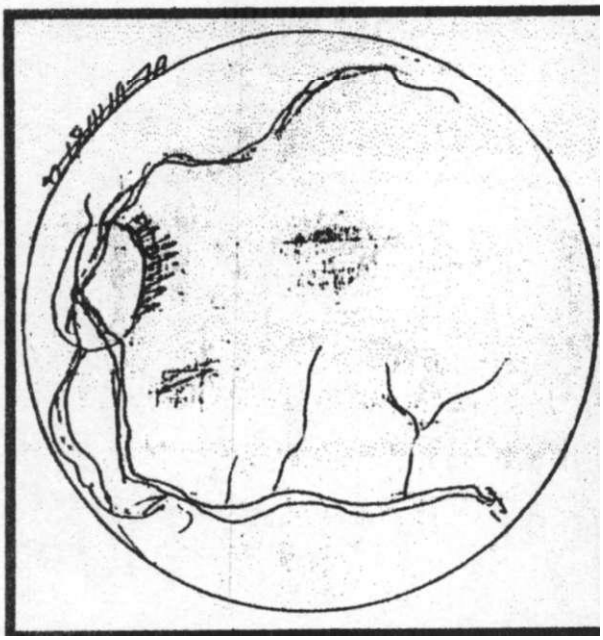
137-Lower temporal branch vein occlusion [or upper]:

- C/O: Upper nasal sectorial field defect.
- Causes: Atherosclerosis.
- TTT: Laser Photocoagulation of affected sector.



138-Atherosclerosis A Benton hypertension:

- 2 Complic: 1-Artery occlusion A branch. 2-Vein occlusion A branch.
- TTT: Control H.T. [Cardiologist].

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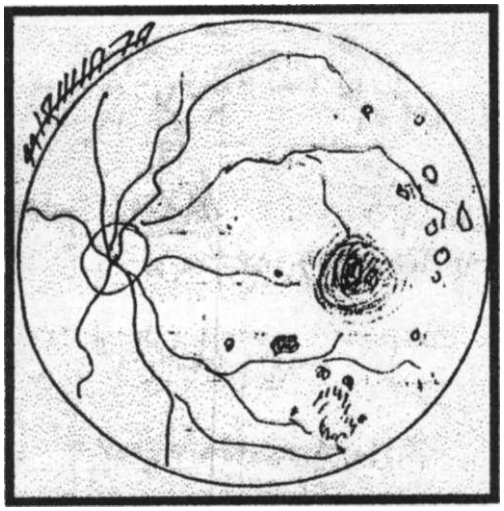
139.140- Mdionofit hypertension with macular stortfIMPORTANT].

Signs: 1-Macular star. (For SLIDE NO. 140):
2-Papilleodema. 5-Cotton wool patches.
3-Attenuated arteries. 6-Blot A flame shaped hemorrhages.
4-Segmented veins.

Causes: 1-Essential hypertension. 2-Renal hypertension.
3-Pheochromocytoma. 4-Preclampsia.

- Refer to: Cardiologist.
- Grading: 1-Generalized arteriolar narrowing.
  2-Generalized 4 focal arteriolar narrowing.
  3-Retinal hemorrhage, macular star & Cotton wool patches
  4-Papilloedema.

TTT: TTT of systemic blood pressure.

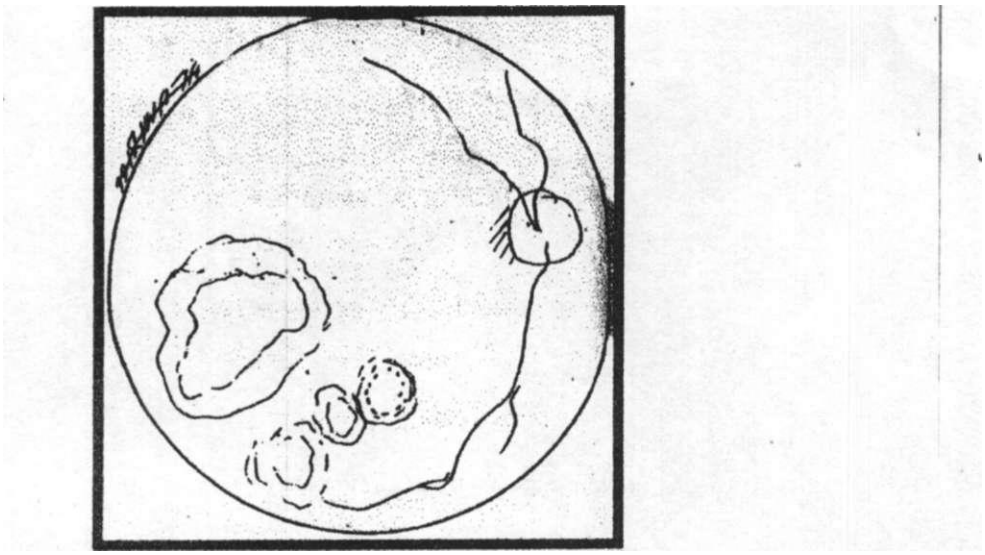


141-Background diabetic retinopathy without maculopathy:

- C/O: Asymptomatic.
- Investigations: FFA.
- Management: 1-Regular follow up.
  2-Control diabetes.
  3-Aspirin.

142, 143, 144-**Background diabetic retinopathy with maculopathy:**

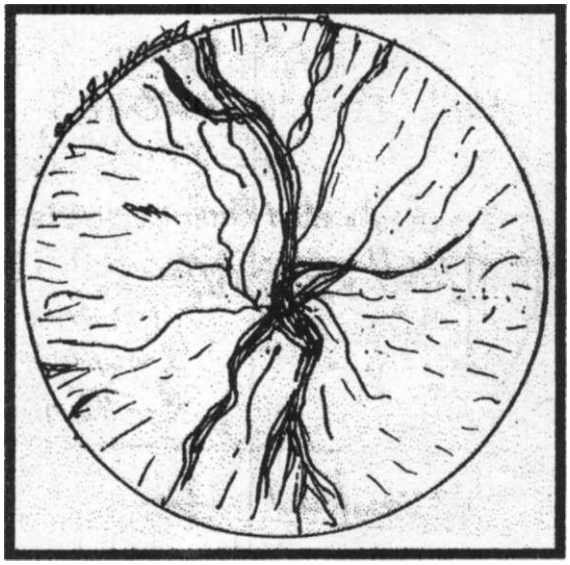
- C/O: Gradual painless drop of vision[Changing reading glasses].
- Investigation: FFA.
- *Causes* of dropped vision in diabetes: 1-Diabetic maculopathy* FFA -> 6 '60.
  2-Vrtreous hemorrhage-* HM.
  3-Transient change of RI of lens.
- *Causes* of blindness in diabetes- l-Glaucoma. 2-Tractional RD.
  3-Retinal ischemia. 4- CRAO & CRVO.
  5-Optic neuropathy.
- TTT: Laser photocoagulation in macular area to seal leakage lesion:
  1- Localized-* Focal laser. 2-Diffuse-* Grid pattern laser.



145-**Background diabetic retinopathy with maculopathy & circinate appearance of hard exudates:**

146-Preprolfferotive [Non-Pro»fcrotive1 Diabetic retinopathy:

- Investigation: 1-FFA. 1-U/S: Vitreous hemorrhage 4 complicated cataract.
  2-Blood sugar test.
- TTT: Laser photocoagulation to ischemic area [Capillary non-perf usion].

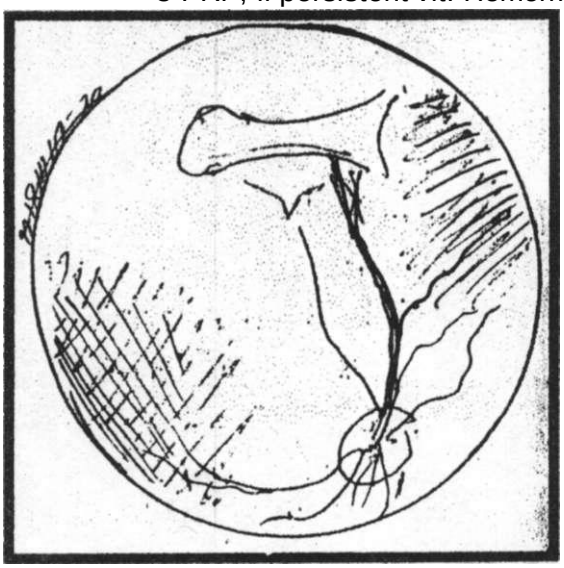


147-ProHferqtive Diabetic retinopathy:[r4VD1: riMPORTANTI.

- Complic: 1-Progression.
  2-Macular edema.
  3-Rubeotic glaucoma, Neovascular glaucoma.
  4-Vitreous hemorrhage ->Tractional RD & Ghost cell Sec. glaucoma.
- Most important investigation in vitreous hemorrhage:
  U/S -> to exclude: - Retinal detachment.
  - 10 Malignancies.
- TTT: PRP.

148-Proliferotive Diabetic retinopathy with vitreous hemorrhage:

- C/O: Marked rapid loss of vision.
- Causes of vit. Hemorrhage: 1-DR. 2-Vein occlusion. 3-6lunt trauma.
  4-RD. 5-Blood diseases. 6-Eale's disease.
  7-IO Malignancies.
- Investigations: 1-U/S. 2-FFA.
- TTT of vit. Hemorrhage: 1-Conservative 6 month with semisitting position.
  2- Alpha chemotripsin, Aspirin & follow up.
  3-PRP, if persistent vit. Hemorrhage-* Vitrectomy.

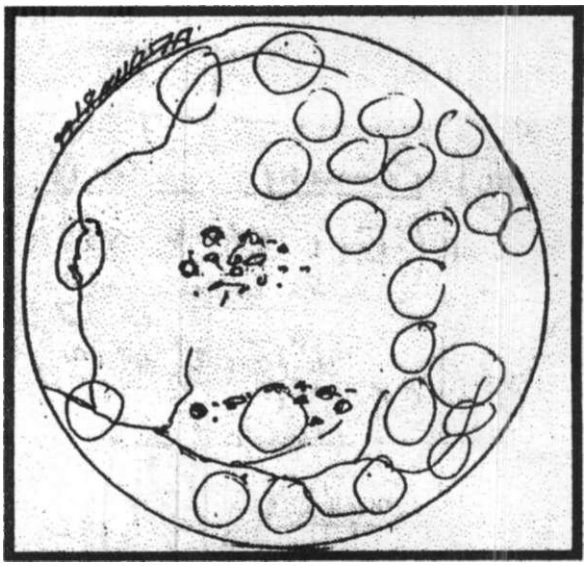


149-Proliferative Diabetic retinopathy with preretinol gliosis:

- Complic: 1-Tractional RD.
  2-Vit. Hemorrhage.
  3-Neovascubr glaucoma.
- TTT: PRP.

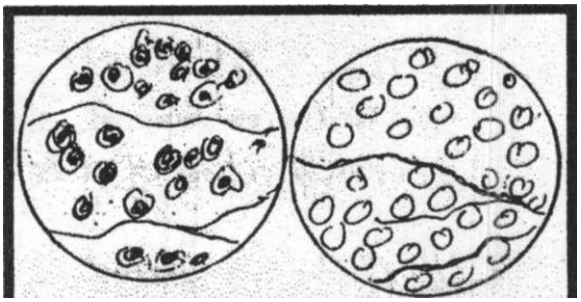
150-Retinitis proliferans[Advanced diabetic eye]:

- Tractional RD due to organized vit. Hemorrhage.
- TTT: 1-Pars plana vitrectomy. 2-Removal of glial tissue. 3-PRP.



151- Xenon arc photocooqulation[Xenon arc spots in PRP]:

- Large Spot size[multiple wave length] , Done by indirect ophthalmoscope.
- Done in: 1-Proliferative DR. 2-CRVO.

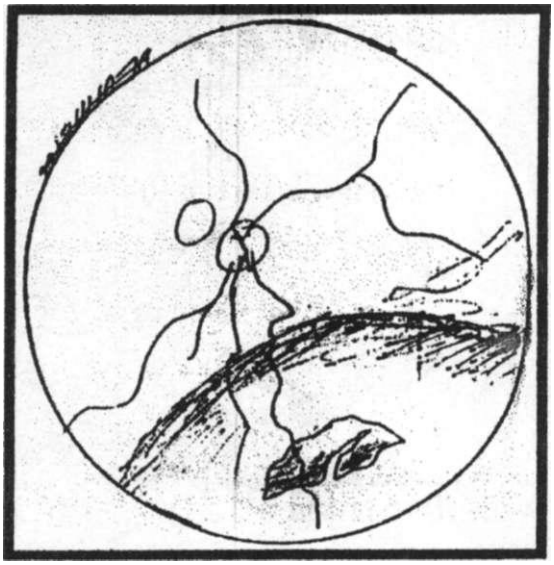


152-Argon laser photocoagulation [Recent + old standing] PRP;

- Indication: 1-Prolif erative DR. 2-Central or branch VO. 3-Small 10 maligr 4-Around retinal tear without detachment. 5-ALT in P0A6. 6-Laser iridotomy.

153-Retinal tear <u>surrounded</u> by <u>Xenon ore loser Photocoagulation:</u>

- *C/O:* Photopsia + Musca volitans.
- Indication: tear without RD.

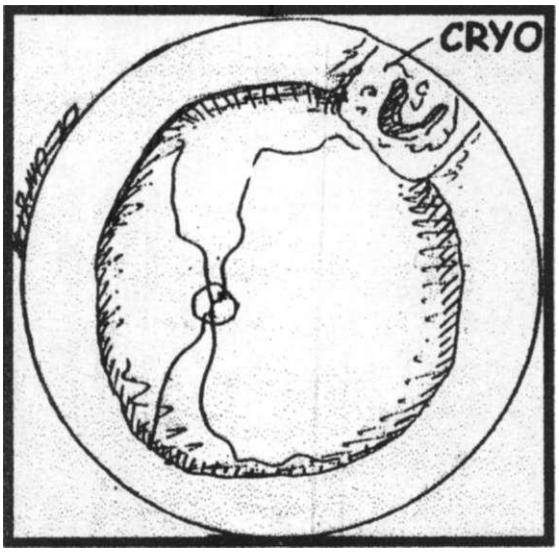


154-Primary <u>rRhcomatogenousl RD (upper or lower) temporal</u> TV. IMPORTANT]

- *C/O:* 1-Musca , Photopsia followed by ,
  Rapid unilateral painless Nasal sectorial (upper or lower)f ield defect.
- Predisposing factors: 1-High myopic. 2-Trauma. 3-ICCE.
- Complication: 1-Retinal atrophy A consecutive optic atrophy [No PL].
  2-Complicated cataract.
  3-IC.
  4-Proliferation of vitreous membranes •> Retinal traction.
- TTT: 1-Breaks sealed by Cryo -70°, then,
  2-Scleral buckling procedure, followed by,
  3-Drainage of subretinal fluid **6** gas [air] injection.
  4-TTT of complication.

155-Sdcrol <u>buckling procedure [from outside]:</u>

- Uses: 1-Rhegmatogenous RD. 2-With pars plana vitrectomy.



156-Scleral <u>buckling procedure [from</u> inside]:

- Indication: RhegmatogenousRD.

K^rTI PALE RETINAX^^\

CRACT	RD
CHERRY RED SPOT	1-TEAR
ALL IN SAME FOCUS	2- TWO LEVELS

N^=X HEMORRHAGES^^

	DR	CRVO
1-HEMORRHAGES:	LESS	EXTENSIVE
2-DISC	NOT	ILL DEFINED - EDEMA

157-Rctinitis pigmentosa: HMPORTANTI.

- *CJQ* [first clinical presentation]: Might blindness. ,

- 2 Physical signs [fundus exam.]:
  1- Attenuated sheathed blood vessels.
  2- Spidery pigmented black spots like bone specules in retina.
  3- Consecutive optic atrophy.
  • Sluggish pupil.

- Investigations:
  1-Field of vision: 1-Ring [annular] scotoma.
  2-Progressive field contraction* tubular field.
  3-Blmd[NoPL].
  2-ER6: early diagnosis-* Flat (no response).

- Complications:
  1-Increase incidence of primary open angle glaucoma [POAG].
  [degeneration in retina A also in qngle].
  2-Complicated cataract.
  3-Consecutive optic atrophy.
  4-Macular atrophy.
- No TTT.

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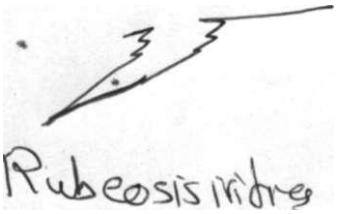

OPTIC NERVE

SLIDES OF OPTIC NERVE

PAPILLOEDEMA
-bilateral
-Stages:
1-Early: 12 slides]
part of disc blurred only.
2-Established: [1 slide]
All edges are blurred
[NISRO].
3-**Advanced :** [3 slides]
All edges are blurred • hemorrhages •exudates.

PAPILLmsrootfc neuritis]
-unilateral
-2j>MsJjde
one affected 4 other normal
All edges are blurred with out hemorrhages or exudates

Y
OPTIC ATROPHY
Whitish slides
[IMPORTANT]

- DISC:

1-EDGE	WELL DEFINED		ILL DEFINED	
	PRIMARY	POST-**6LAUCOMATOUS**	SECONDARY [post papillitis]	CONSECUTIVE
2-CUP:	NORMAL [wide shallow]	CUPPING	OBLITERATED	NORMAL
3-BLOOD VESSELS:	NORMAL [from center] /	NORMAL (Discontinuous) [Nasal shift]	SHEATHED	SHEATHED [attenuated]
RETINA:	NORMAL	NORMAL	NORMAL	DISEASED _1-Macular scar. 2-Brown patches In retina.
	Causes; 1**-Hereditary.** 2-Retrobulbar | neuritis.	**Investioalions:** t-Gonjoscopy. 2-fleTd	**Causes:** I-Papjjedejixi. 2-Papjflitis.	

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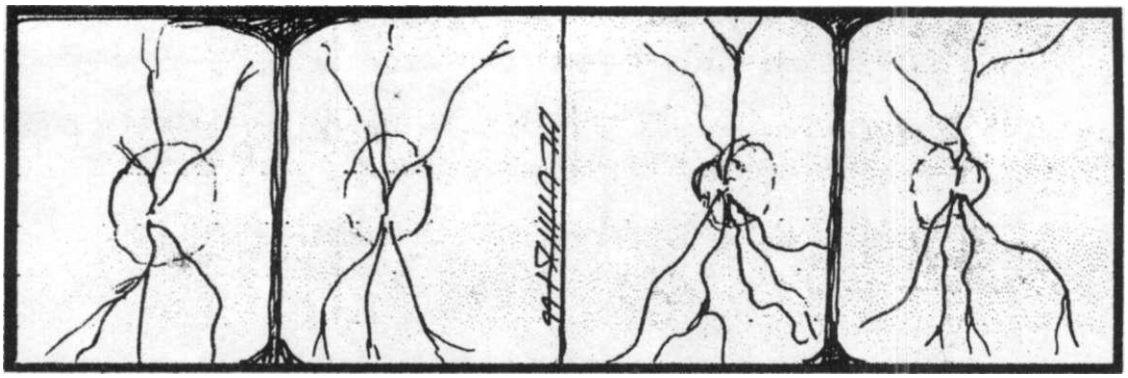
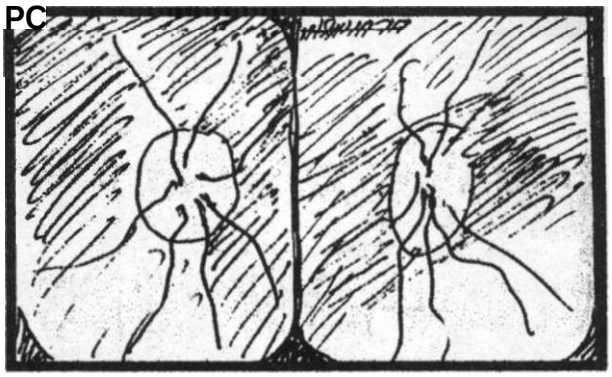
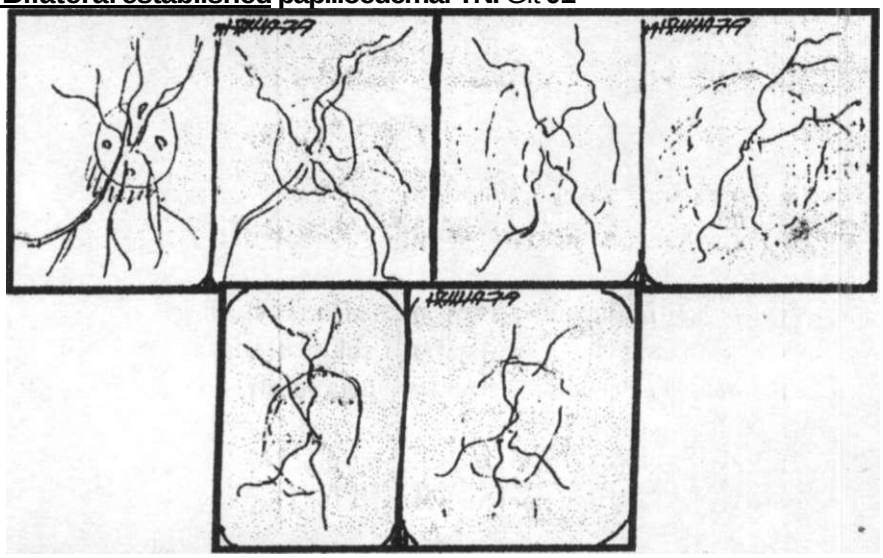


158.159-Bilateral early Papilloedema: [159^ BLOND].

- *CIO:* t-Late drop of vision.
  2-Amaurosis Fugax [recurrent transient attacks of blurring of vision.
  3-Symptoms of increase I C T headache, projectile vomiting, decrease level of consciousness.
- Field changes: 1-Bilatera! enlargement of blind spat.
  2-Relative central scotoma of blue color.
- To whom you refer: Neurologist.
- **I I I** of papilloedema:
  1-TTT of original cause.
  2-Medical decompression by Hyperosmotic agentsftemporary].
  3-If persistent increase of ICT-> Optic n. sheath decompression operation.



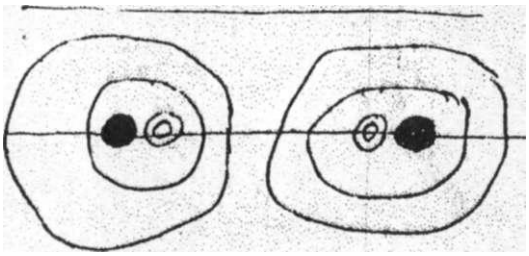
160-Bilateral established papilloedema: TNI Gft **01**



161.162.163-Bilateral Advanced Papilloedema:

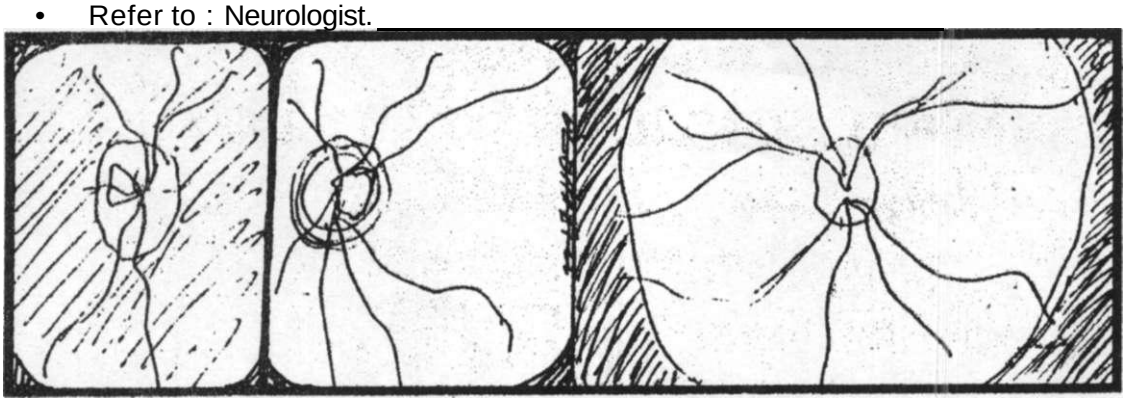
- **Identify** abnormalities [pathological features]:
  -Swollen disc with,
  edge -> 1-Burred ill defined edge,
  cup -> 2-Obliterated cup.
  Vessels -> 3-Congested veins.
  4-Flame shaped hemorrhages & exudates.
  5-Cotton wool patches.
- Cause: Increase I C T :
  1-Space occupying lesion in CNS.
  2-Beninn increase in CSF by: Contraceptive pills, Vit A intoxication. Malignant H.T.
- Investigations: -CT scan 4 MRI on brain.
- Complic: Post-papilloedemic [Secondary] optic atrophy.
- D.D.: 1-Papilloedema. 2-Papillitis.

N.B. PAPILLOEDEMA ENGORGED BLOOD VESSELS.
HYPERTENSION-* THIN ATTENUATED BLOOD VESSELS.



164-Bilateral enlargement of Blind spot in case of papilloedema:

- Etiology: 1-Papilloedema. 2-Temporal myopic crescent. 3-Glaucoma.
- Refer to : Neurologist.



165. 166-PqpiHitis: \ 166-Disc swelling for P.P.]:

- *CIO:* Acute unilateral painless drop of vision with impaired color sense.
- Pupil: Marcus Gunn Pupil->Sluggish direct, normal indirect, unsustained direct.
- Signs: 1-Swollen hyperemic disc. 2-Partially obliterated cup[ill defined].
- Causes: 1-Disseminated sclerosis. 2-Diabetic neuropathy. 3-Idiopathic.
- Complic. :Post papillitic optic atrophy.
- Investigation: Field : 1-Unilateral enlarged Blind spot [Centroceacal scotoma].
  2-Relative central scotoma for red 4 green.
- TTT;1-Systemic steroids [Massive doses]. 2-Systemic Anti-inf lammatory. 3-Vit B.

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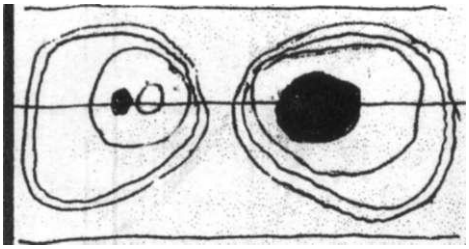
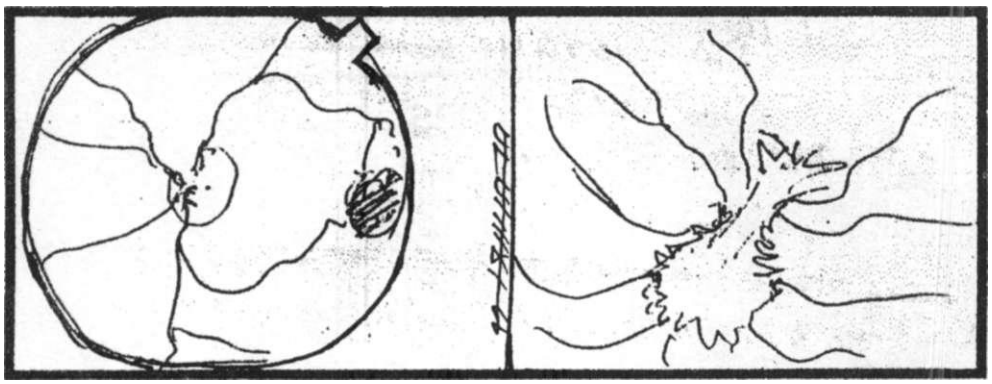
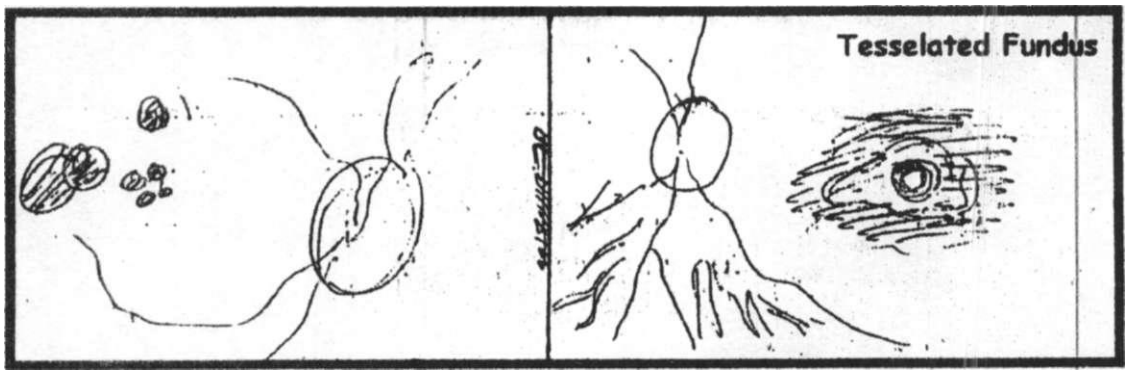


167-Unilateral enlargement of Blind spot in cose of papillitis:[optic neuritis]. [Centroceocol scotoma].



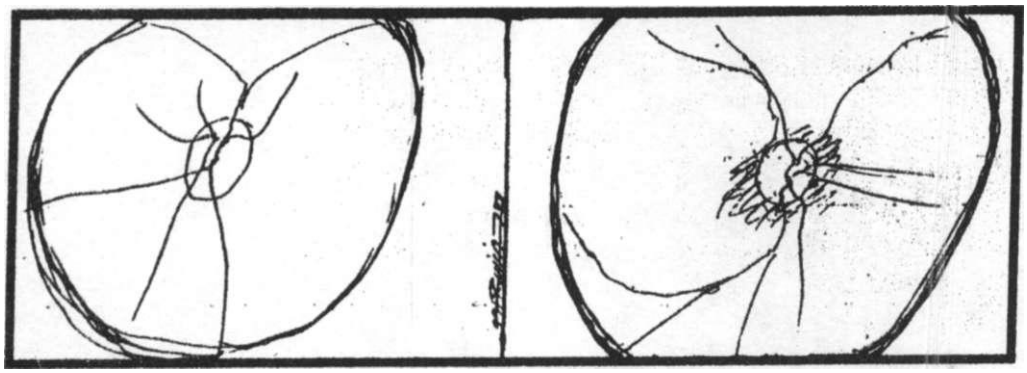
168.169-Secondary optic atrophy [post-papillitic]:

- *Cause* : 1-Papillitis. 2-Papi l (oedema.



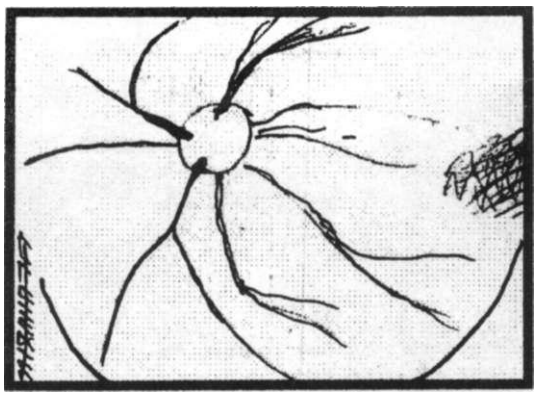
170-Consecutive **optic atrophy: 171-Consecutive optic atrophy with macular** *scar:*

- *Causes:* 1-Neglected retinal *diseases or* chorioretinitis. **2**-Retinitis pigmentosa.



172,173-Primary optic atrophy:

- *Causes: {-Hereditary. 2-bisseminated sclerosis.* 3-Retrobulbar *neuritis.*
  4-Fronta\ lobe tumors. **5**-Neurosyphilis[*general paralysis of insane].*



174-Post qlQucomotous optic atrophy: [undermined edge A undermined blood ves.].

TUMORS

1

175-Leukocorio in child for differential diagnosis:

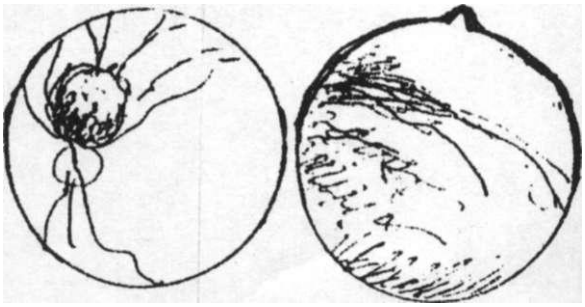
[VERY IMPORTANT]

D.D.: 1-Retinoblastoma.
2-Congenital cataract.
3-Cyclitic membrane.
4-Exudative RD e.g. Coat's *disease.*
5-Retrolental f ibroplasiaf Retinopathy of prematurity].
6-Hyperplastic primary vitreous.
7-Coloboma of choroid.

- Investigations:
  1-Fundus examination.
  2-U/S.
  3-CTscan.

176-Rettoobtastomo:

- Presentation: 1-Leukocoria [Commonest symptom].
  2-Squint -> if unilateral. 3-Nystaamus-* if bilateral.
  4-Buphthalmos.
- Investigation: -X-ray & U/S -> Calcification.
  -CT scan.
- Cell of origin: Retinoblast.
- TTT: 1-Small : Cryo or Laser.
  2-Medium: Radioactive cobalt 60 disc[plaque].
  3-Large : 1-Enucleation with long stump of Optic n.
  2-External beam irradiation.



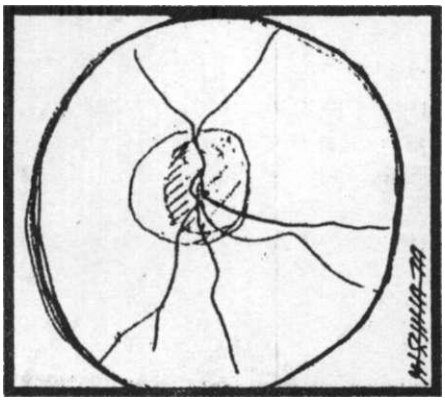
177.178-Malignant melanoma of choroid with secondary retinal detachment:

- Cell of origin: Melanocyte of choroidfUveal tract].
- Presentation [C/O]: [Routine fundus examination]:
  1-AAetamorphopsia, Headache. 2-Drop **of vision**[central], field defect[penpheral].
  3-Uveitis. 4-Secondary glaucoma.
- Complic: Metastasis to liver.
- D.D.: 1-Choroidal nevus.
  2-Choroidal heamangioma.
  3-Other secondary Choroidal malignancies

ERRORS OF REFRACTION & SQUINT

179-Retinoscopy:

- Uses: 1-Objective measurement of refractive errors & fitting glasses.
  2-Examination of red reflex.
  3-Detection of Punctum Remotum of patient.
  4-Detection 4 measurement of astigmatism.



180-Temporal myopic crescent in high myopia: |TMPORTANT|.

- *CIO:* Defective far vision , then defective near [in degenerative myopia].
- Complication: 1-primary RD.
  2-Glaucoma-> Primary OAS.
  -> Secondary pigmentary.
  3-Complicated cataract.
  4-Fuch's spot [Macular scar].
  5-Divergent squint[latent exohporia , Concomitant exotropia].
  6-Consecutive optic atrophy.
- Next step after diagnosis: Exam, periphery of retina [RD] , then Retinoscopy.
- I I I . [Optical correction]
  1- -ve concave lenses-* power=100/PR.
  2- Surgical I I I: Excimer laser or Implantation of [-ve] I O L
  3- Low vision aids.
- Etiology of refractive myopia: 1-Curvature: 1-Cornea: Keratoconus.
  2-Lens: Subluxation, Ant. Dislocation.
  3-Cyclitis-> Transient myopia.
  2-Index:I-Senile nuclear cataract.
  2-Uncontrolled diabetes.
  3-Acute IC.

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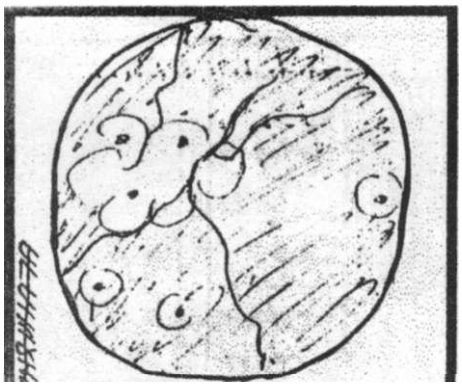
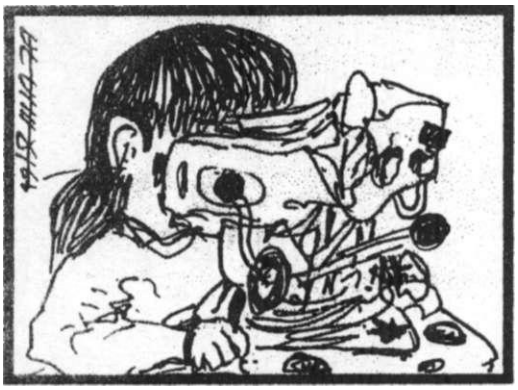


181-Fundus picture in high **myopia [Myopic fundus degeneration]:**

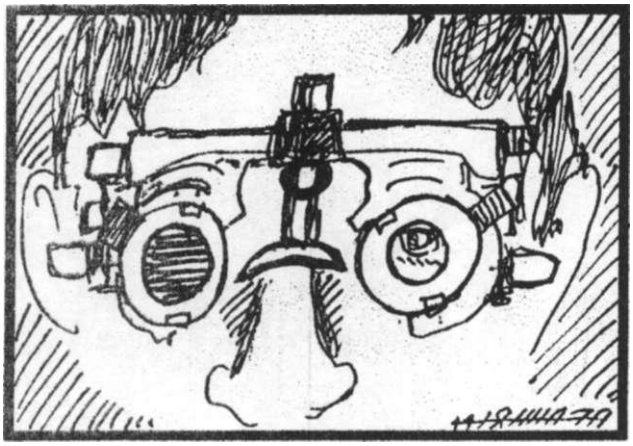
Abnormalities: 1-Patches of chorioretinal atrophy. 2-Fuch's spot.

- Causes of blindness : l-61aucoma[Primary or secondary]. 2-RD.



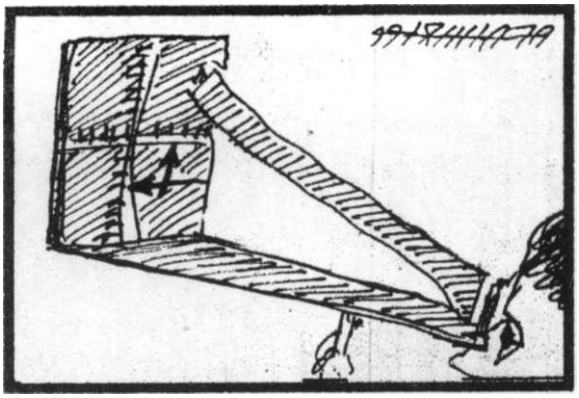
182-Synaptophore:riMPORTANT1.

- Uses: 1-Evaluation , training A assessment of binocular vision.
  2-Measuring angle of deviation of squint.
  3-Detection of abnormal retinal correspondence.
  4-Orthoptic training[M I J.



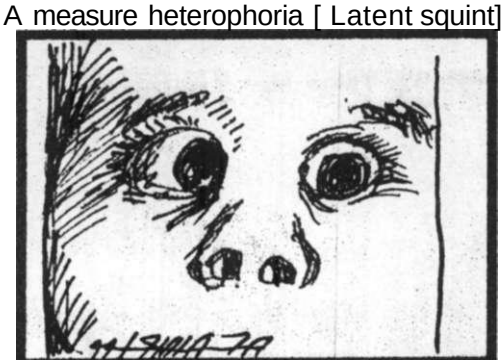
183-Maddox rod:

- Uses: 1-Detect heterophoria [Latent squint] for far.
  2-Measurement aTheterophoria with far by prism tangent scale.



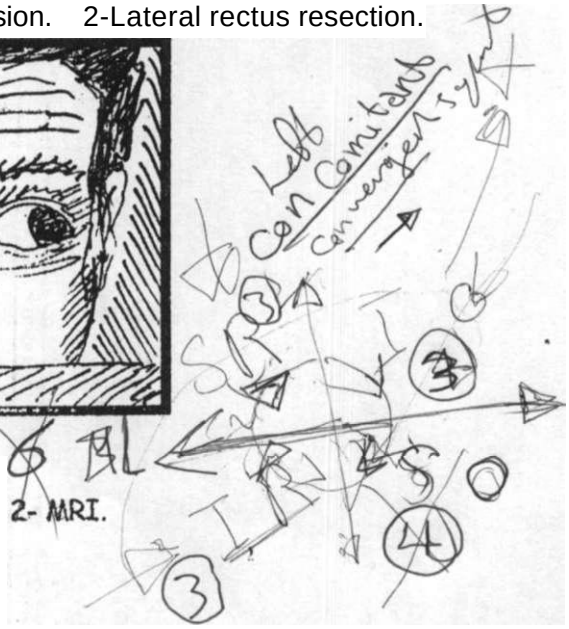
184-Moddox wing:

- Uses : Detect A measure heterophoria [Latent squint] for near.



185-Infontile Esotropia [(True) Manifest convergent squint! in infant:

- Investigations: 1-Fundus exam, to exclude retinoblastoma.
  2-Retinoscopy under Cycloplegic[Atropine].
  3-Refraction to exclude hypermetropic.
- Common cause: Uncontrolled hypermetropic.
- Most serious cause: Retinoblastoma.
  CIO: Cosmetic disfigurement.
- TTT: 1-Correction of hypermetropic.
  2-Surgery: 1-Medial rectus recession. 2-Lateral rectus resection.



186-Left superior rectus paresis:

- * ***CIO:*** Diplopia in left upward gaze.
- Investigations: i-Diagnosis: 1-CT scan.
  2-Refcr to neurologist.
- ** TTT: 1-Alternating cover for* 6 month.
  2-Relieving prism.
  Then surgical correction after & month [if not cured].
- Inferior oblique over action.

it-

187-Unilaterol Six nerve palsvT Late pal rectus porolysislfParalytic convergent squint:

- Main ***CIO:*** 1- Binocular diplopia that disappear on closing either eyes.
  2- Headache. 3-Vertigo.
- Most important investigation: **1**-Hess ***screen.***
  2-Diplopia chart.
  3-Fundus examination for detection of papilloedema
  4-Refer to neurologist.
- To whom you refer : Neurologist.
- Common cause: 1-Diabetes . 2-Increase ICT.
- Complications: 1-Strabismic amblyopia. 2-Ocular torticollis.
- Management: 1-Neurological examination [First line of TTT].
  2-Alternate cover 6 month. 3-Relieving prism.
  4-Muscle surgery.

ORBIT

188-Hertel's cxophthalmometer:

- Use: Diagnosis A measure amount of proptosis of eye.
- Normal value: Cornea protrude in front of lateral orbital margin 18mm +/- 2.

189-Bitoterol dysthyroid ophtholompothyflrritotive stoxje)rThyrotoxie exophthalmos]: [VERY IMPORTANT].

- C/O: Cosmetic A burning *sensation* + lacrimation.
- Most serious local complication: Ulcer with logophthaftnos.
- Most Serious systemic complic: Heart failure.
- To whom you refer: Endocrinologist.
- *2 Causes:* 1-Thyroid *disease.* 2-Leukemia. 3-Lymphoma.
- Investigations: 1-Thyroid function(T3, T4>
  2-X-ray + U/S + *CT scan* ->to exclude orbital tumors.
- TTT: 1-Earry optical: **TTT** of lagophtho^mos [artificial *tears];*
  2-Advanced: 1-Systemic steroidsfMassive doses].
  2-Orbital decompression surgery[Orbitotomy].

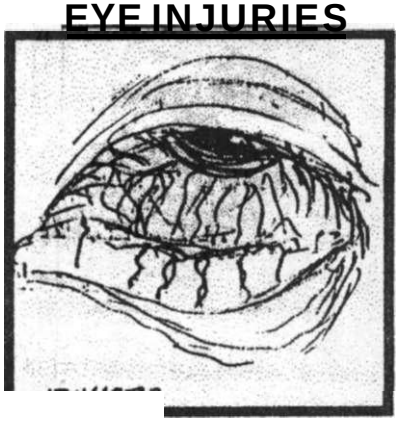
190-Bilateral dysthyroid ophthalompathy (mf [Iterative & restrictive stage) rThvrotoxic exophthalmos]: [PUFFINESS OF LOWER LIDS].

- C/O: Binocular diplopia.
- Complic: 1-Ulcer with lagophthalmos. *2-Secondary OAG.*
  3-Pressure on optic n. 4 optic n. atrophy. Malignant exophthalmos.
- TTT: In general: 1-Management of lagophthalmos-^Arttficial tears.
  2-^anagement of Sec glaucoma.
  3-Massive *doses of* steroids.
  For restrictive stage; l-Radiotherapy[External beam orbital irradiation]
  2-Surgical correction of squint [EOM surgery].
  3-Orbital decompression.

191-Bilate-al swelling in palpebral port of lacrimal gland:

- Causes: 1-Hodgkin lymphoma. 2-Sarcoidosis [Miculikz's disease].
- Abnormality: S-shaped deformity of upper eye lids.
- TTT: Bilateral surgical excision.

EYE INJURIES



192-Alkoli burn: [IMPORTANT].

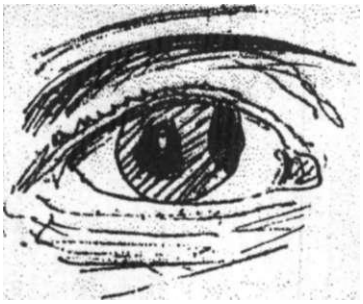
- Complic: 1-Corneal scaring & vascularization 2-Xerosis 4 Symblepharon.
  3-Trichiasis, madarosis. 4-Cicatricial entropion & ectropion
  5-Perf oration of outer coat.
- First aid [Immediate line of TTTJ: Wash with Antidote[Boric acid], lemon .water.

193-Black eye with Subconjunctival & subcutaneous hemorrhage:

- Cases: 1-Blunt trauma. 2-Hypertension.
  3-Bleeding tendency e.g. leukemia. 4-Idiopathic
- D.D.: Fracture base of skull.
- TTT: 1-Cold compresses for 24 hours [one day].
  2-Hot fomentation • Antibiotics-*Spontaneous resolution.
  3-Search for other effects of trauma [through examination][Important].,

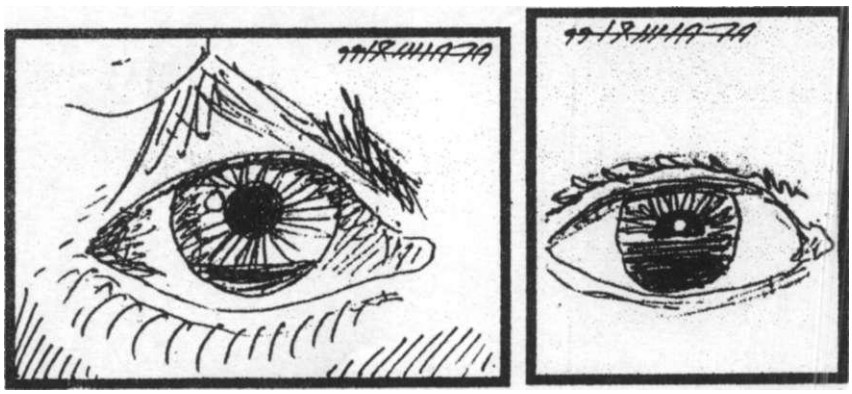
194-Comeol abrasion [stained with fluortscirrc *stain* **seen by cobqlt blue fitter 11 tumi notion]:**

- *Causes:* 1-Trauma. *2-Contact* lens.
- TTT: Antibiotic + *Bandage.*



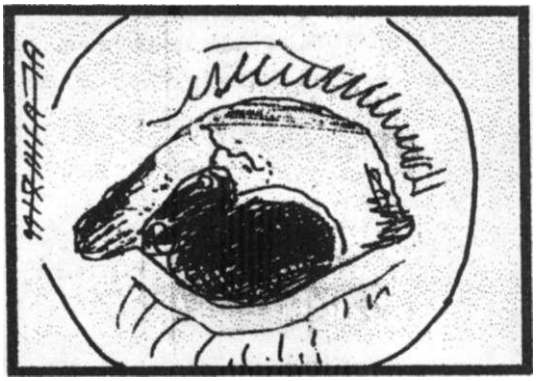
195- Traumatic iridodiolysis: [Important].

- *C/O: Uniocular* diplopia
- *Character: disappear* on *covering the diseased eye.*
- D.D.: 1-Subluxated ***dear*** lens with edge passing out ***in*** pupillary area.
  2-Incipient stage of senik. cortical cataract.
  3-Big peripheral *iridectomy.*
  4-fita\ignant mebnoma of *ciliary* body [at its root] -> one red reflex-.
  [But iridodialysis -> 2 red reflexes].
- TTTi 1-Coiored CL with opaque periphery.
  2-Suturing iris in sclera.
  ^-*Convert* iridodialysis into *sector* iridectomy.
  4-Proper investigations for other effects of trauma.



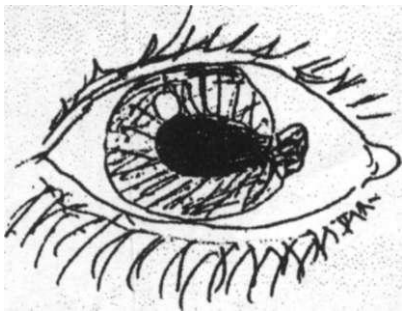
196. 197-Hvphaema:

- Etiology: 1-Traumctic. 2-Iridodialysis.
  3-Rubeosis iridis. 4-Blood diseases.
  5-Tumors of iris & ciliary body[Malignant melanoma of iris].
- Complic.: 1-Secondary glaucoma.
  2-Corneal blood staining.
- TTT: 1-Hospitalization & bed rest & semisitting position.
  2-Bi lateral bandage.
  3-Control of sec. glaucoma.
  4-Topical steroids , Alpha chemotripsin IM **6** Vit K.
  5-If uncontrolled glaucoma or Hyphaema more than one week->Paracentesis.



198-Sderal rupture with ciliary body prolapse:

- Most serious complic: 1-Suppurative Endophthalmitis. «
  2-Sympathetic ophthalmitis.
  3-Atrophia bulbi.
- TTT: [Urgent surgical TTT]: 1-Hopef ul.Suturing sclera . excision of prolapsed C.B.
  2-Hopeless: Enucleation.



199-Corneal rupture with traumatic iris prolapse:

- Complic: 1-Suppurative Endophthalmitis.
  2-Irregular corneal astigmatism.
- TTT: 1-Excision of prolapsed iris.
  2-Suturing of cornea.
  3-Reformed anterior chamber.

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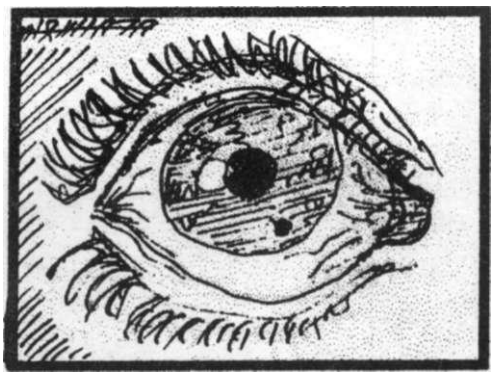

200-**Impacted extro-oculor corneal fore km body:**

- C/O: Foreign body sensation, pain, headache, lacrimation & photophobia.
- Complic: 1-corneal ulcer.
  2-Corneal 4 conjunctival granuloma.
- TTT: **1-** Removal: -A drop of local surface anesthesia.
  -Scraping of foreign body with a needle or corneal spud.
  -If there is rusty ring -> Removed by rust remover.
  2-Local Antibiotics + Bandage.

GOOb LUCK

(A^/rvvr) *u&* **ji^pi^yi ^**

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,1 ***PRACTICAL EXAMINATION*** /

- Exam Schedule:
  - 6 stations x 5 marks (4 ***Cases*** **+** 2 slides)
  - Each station 2 min
  - Then 7th station-* 2 min revision
  - Then to ORAL EXAM
- Exam Tips:
  1- Pray to GOD + Obey your PARENTS
  2- Enter EARLY
  3- Read Question carefully: Right, left, Upper, lower
  4- Write Quickly
  5- Don't panic, if new lesion
  6- Strong Torch or Hand light with full batteries
- During exam: 1-Patient look forward 2-Light obliquely 45°
- Any lesion= 4S +N No./Site/Size/Shape/Sp. Character

COMMON CASES IN EXAM

1- Examine LENS. Examine Pupillary area-> lens * pupil:

1-Senile cortico-nuclear cataract:

1-Diagnosis	***msc*** (Immature senile ***cataract)***	MSC (Mature senile cataract)	HMSC (Hyper-mature senile cataract)
2-Site	Pupillary Area		
3-Color	Grayish white	white	Upper-* milky white Lower-* dark brown nucleus
4-Iris shaddow	+ve Except intumescent	-ve	+ve or -ve
5-Not sublaxated			

2- Aphakia (±after cataract):
Jet black pupil / White patches of opacification of Posterior capsule ± IOL

3-. Traumatic cataract: OTHER SIGNS e.g. -Iridectomy(accidental)
-Linear corneal scar

4-Complicated cataract: Iridectomy -> Glaucoma ^0\> " ^ ^ S ^
Festooned pupil •> Uveitis

5-Congenjtal cataract: Anteroir polar /Zonular lamellar / Sutural ^<T)

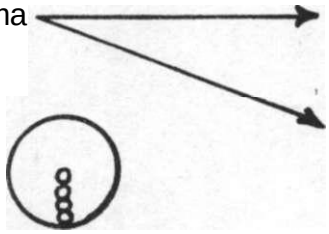
2-Examine pupil: ***35 * CR***

^ D i l a t e d **O 0 @ ©**

3-Shape: Rounded/ Drawn up /Sector iridectomy /Festooned/Key hole
4-Colc r -> (if cataract or Aphakia-* describe)
5-Rea:tion->Fixed irreactive
+/- 6-No.
7-|Equality

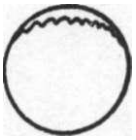
jf- ***Examine Cornea:***

-CornealOpacity:
1- Type of opacity'
- Faint -> Nebula
- Dense ->Leucoma



	pupil	AC
Adherent	**Pear shaped**	**Irregular**
Non adherent	RR	Regular

2-Site:
A-Localized:
central
para-central
mid-peripheral
peripheral
B-Diffuse y p v ***f~***
3 - Vase: superficial / Deep — \ ) \ ~)
4-Shape:
5-Pannus siccus of healed_ trachoma (HTP) in all cases.
6-t A reus senilis



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4- Examine Conjunctiva:

1-Pterygium:

-Def:

1-Tr. vase fold of conj tissue ***encroaching*** over nasal side of cornea A limbus

2-Apex-* PA /Base-* inner Canthus

3-Head-»Cornea /Neck-* Limbus /Body-* Sclera

- Apex •* Pupillary area / not
- Type: 1-Progressive-* pink, Vascular, Fleshy
  2-Regressive-» Whitish, membranous, atrophic
  3-Recurrent-* Ask pt

2-Pinguecula: -Def / -Stops at limbus

5- Examine Eyelid: ***P * 3M***

- Position (ptosis)
- Masses (chalzion)
- Margin (Ent, Ect, Trich. Stye)
- Movements

N.B.-No lid eversion /-No touching

-Closure Lagophthalmcs observed in each case

1-Chalazion:

5S + CN + NAD

1-No.: Single or Multiple

2-Side: Rt / Lt

3-Site: 1/3 Medial/Lateral

4-Size: Average

5-Shape: Rounded

6-Sp ***CCC*** Loc swelling Not Hot.Attached to skin,Red,Tender /Behind grey line/Decrease by contraction of O.O./Firm

7-Complic: LL ectropion/ UL ptosis

8-NAD: MMP

2-Trichiasis «•/- Entropion:

1-No.: S/M

(Maldirected rubbing lashes against cornea 4 conj)

2-Site: 1/3

3-Post lid margin: Entropion / No Entropion

Entropion:-UL-* Cicatricial ,LL-* Old: Senile

Child: Congenital

4-NAD : MMP

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3-Entropion:

"l-Ssf

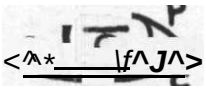
2-Side

3-Degree

4~Etiology

5-Corneal complication

4-Ptosis:



2-Partial/Complete (Mild/Moderate/Severe)

1-Def: Drooping down (of Rt / Lt / Bilat UL

3-Sup palpebral Furrow (SPF)(Preserved / not)

4-With / without compensatory brow elevation-* <_W o«/thumb test

-j. elevation, Levator Function: < 5mm-> no AAov, >5mm-> Mov (Fair/Good/Poor)

5-Type: -Aquired: 1-Traumatic (scar of skin)

2-IIIn lesion (Exodeviation / Dilated pupil)

3-Senile (deep SPF)

-Cong: Young age / epicanthus

6- NAD : MM

5-Ectropion:

1- Def

2-Side: Rt/Lt/Bilat

3-Degree: Outward rolling of lid margin + punctum

4-Etiology:

1-Paralytic: | closure

2-Cicatricial: Scar

3-Senile:Normal closure

6-Stye:

45 + N + NAD

1-No.:

2-Side:

3-Site:

4-Size:

5-Sp CC:HART /Pus pointing at root of lash/Increase by contraction of O.O.

6-NAD: MMP

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6-Examine Ocular Motility:

Concomitant Squint:

1-Convergent / Divergent (Observe)

2-Alternating / RT or LT. . . . . .a-ORGANIC LESION,

b-ASK PATIENT, T,>J ***hi*** ***«t****

c-COVER TEST

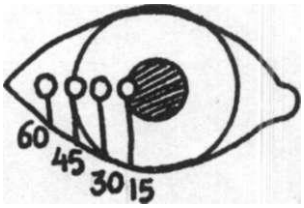
3-Comitant

4-Squint

5-PAD: Angle 15, 30, 45, 60 by corneal light reflex

6-Predominant fixation (if alternating)

7-No limitation of movement (H shaped test)



7-Examine Iris:

1-Color : (Heterochromia)

2-Pattern : (Iridectomies or preserved)

3-Openings: PUPIL-* 3S +CR

4-Tremolous or Not

5-Synechia or Not

8-Examine Anterior Chamber:

1-Depth (compare to other side)

2-Content: 1-Hypheama : 1-level 2-Depth

2-Hypopyon

3-ACIOL : (UGHC $)

4-Ant Dislocated Lens : clear , Cataractous

5-SO: Inverted hypopyon

9-Examine Medial Canthal Area: MUCOCELE

1-Shape: Localized rounded swelling

2-Size: About - x -

3-Site: Below MPL/ MCT

4-Skin over: Not HRT (Hot, Red, Tender)

5-Not attached to skin or Lacrimal fistula.